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TRAFFIC & ENGINEERING SURVEY

FOR THE

CITY OF BELMONT

MAY 1982

BY

PUBLIC SERVICES/
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AND

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Department of Public Services

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Belmont, CA 94002

Office of: The City Manager

May 28, 1982

TO: Honorable Mayor and City Council
FROM: James P. DeChaine, City Manager 
SUBJECT: TRAFFIC AND ENGINEERING SURVEY, DATED MAY 1982

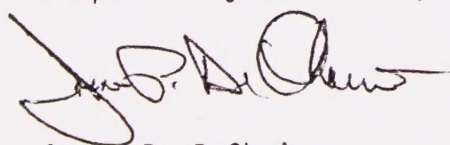
The 1982 report of our Traffic and Engineering Survey for the establishment of speed limits on the local street system except El Camino Real, is herewith submitted for your review and action. This survey was prepared by the Engineering Staff in close cooperation with the Traffic Division of the Police Department in accordance with procedure outlined in Chapter 8 of the California Department of Transportation Traffic Manual. CALTRANS has primary responsibility for the traffic study and signing of El Camino Real.

Section 22350 of the California Vehicle Code - The Basic Speed Law - "states that no person shall drive at a speed greater than is reasonable or prudent....and in no event at a speed which endangers the safety of persons or property."

The majority of drivers comply with this law, and disregard regulations which they consider unreasonable. It is only the top fringe of drivers who are inclined to be reckless and unreliable, or who have faulty judgement and must be controlled by enforcement. Speed limits set at or slightly below the 85 percentile speed provide law enforcement officers with a means of controlling the drivers who will not conform to what the majority considers reasonable and prudent.


Only when roadside development results in traffic conflicts and unusual conditions which are not readily apparent to drivers are speed limits below the 85 percentile warranted.

Respectfully submitted,



James P. DeChaine
City Manager

AN:gs



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PREFACE

This study is jointly prepared by the Police Department and the Public Services/Engineering Department of the City of Belmont in accordance with the procedures outlined in Chapter 8 of the Traffic Manual of the Department of Transportation of the State of California. The radar checks, raw data on accidents and inventory of road conditions were gathered by the Traffic Division of the Police Department. The analysis and recommendations were done by the Engineering Division of the Public Services Department.

It is hoped that it will provide a sound and legal basis for enforcement of speed limits in the City.

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INTRODUCTION

A. GENERAL

A spot speed study involves the observation, recording and analysis of individual vehicle speeds of a point or "spot" on the roadway.

Speed is a basic value used to describe traffic flow. It is an important characteristic of traffic which is needed to make a wide variety of decisions with regard to traffic regulation and control and other analysis.

Realistic speed zoning is one of the traffic engineering applications of spot speed study. It involves the following:

1. Observing and measuring prevailing speeds;
2. Analyzing accident records;
3. Reviewing any unusual conditions not readily apparent to drivers;
4. Selecting a speed which will appear reasonable to the majority of drivers;
5. Posting the speed limit adequately to inform drivers.

Realistic speed zoning may have the following results:

1. Reduce the speed differential in a traffic stream where there is a large variation of speeds. This makes driving easier, increases capacity and reduces the likelihood of accidents by encouraging most drivers to travel at about the same speed;
2. Give enforcement officials a good guide as to what a "reasonable and prudent" speed is under normal conditions and permits concentration of enforcement against real traffic violators;
3. Give motorists a speed limit which they can respect and obey. When drivers respect speed limits in areas with which they are familiar, they are more likely to pay attention to limits in unfamiliar areas;
4. Assist traffic courts by providing a realistic guide as to normal, reasonable and prudent speeds;

5. Give local residents a realistic picture of the actual speed of most traffic. There is no safety in blind reliance on a speed limit inconsistent with speeds actually traveled by traffic;
6. Insure that all speed zones satisfy the requirements of state law.

Realistic speed zoning will not automatically slow down or speed up all traffic. Traffic studies have shown that speed limits have a negligible effect on the majority of drivers, but realistic limits can sometimes be effective in bringing the non-conforming driver into line.

Speed zoning will not always satisfy local demands that "something" be done about traffic. In many cases, speed is not in itself the major problem. However, realistic zoning can be useful by giving local authorities a consistent, defensible basis for enforcement action.

B. PURPOSE

The purpose of this study is to establish a realistic speed zoning for all arterial and collector streets in the City. This has become important as a result of California state legislation requiring engineering and traffic surveys on all streets on which limit enforcement is done by radar speed check.

Thus, all arterial and collector streets in the City were surveyed. Checks made on these important streets at sufficient locations to insure that each street section having unique characteristics was individually surveyed. In addition, a representative street or streets from each of the residential neighborhoods in the City was surveyed in order to satisfy the California Vehicle Code Guidelines and enable the establishment of speed limits on the local street system.

Figure 1 shows the streets surveyed with the observation points indicated by asterisks.

SUMMARY AND CONCLUSION

<u>LOCATION/SECTION</u>	<u>EXISTING SPEED</u>	<u>CRITICAL SPEED</u>	<u>RECOMMENDED SPEED</u>
RALSTON AVENUE, WESTBOUND			
Hiller Street to South Road	25	33	25
South Road to Alameda	25	31	30
Alameda to Hallmark Drive	35	38	35
Hallmark Drive to Junction Route 92	35	39	35
RALSTON AVENUE, EASTBOUND			
Junction Route 92 to Hallmark Drive	35	39	35
Hallmark Drive to 300' from Pullman Avenue Junction	35	42	35
Alameda to South Road	25	32	30
South Road to Hiller Street	25	32	25
Overpass	35	45	35
MIDDLE ROAD	25	29	25
OLD COUNTY ROAD			
North of Ralston Avenue	25	31	25
South of Ralston Avenue	25	30	25
ALAMEDA			
North of Ralston Avenue	25	25	25
South of Ralston Avenue	25	33	25
HALLMARK DRIVE	25	30	25
ELMER STREET	25	27	25
CIPRIANI BOULEVARD	25	28	25
RUTH AVENUE	25	36	25
EL VERANO WAY	25	36	25

<u>LOCATION/SECTION</u>	<u>EXISTING SPEED</u>	<u>CRITICAL SPEED</u>	<u>RECOMMENDED SPEED</u>
SOUTH ROAD	25	27	25
CHULA VISTA DRIVE	25	31	25
NOTRE DAME AVENUE	25	31	25
HILLER STREET	25	30	25
CHESTERTON AVENUE	25	29	25
SAN JUAN BOULEVARD	25	32	25
SHOREWAY ROAD	35	36	35
DAVEY GLEN ROAD	25	30	25
CARLMONT DRIVE	25	34	25
*LYALL WAY	25	32	25
*HASTINGS DRIVE	25	29	25

* New streets added per Belmont Police Dept.

CHAPTER 1

STUDY PROCEDURES

A. CONDUCTING THE RADAR CHECKS

As described in the introduction, radar checks were made on all street sections in which the traffic speeds, the traffic volumes, the street width or other significant factors were different from an adjacent section. Thus, an important arterial may require speed surveys at several locations to account for changes in these factors where as a less important street with consistency in these areas may be sufficiently surveyed with just one check.

A test site was selected within the general location to reduce or eliminate the influence of the observers and measuring equipment. Factors considered were:

1. Equipment should be concealed from or made as inconspicuous as possible to, the approaching driver;
2. Observer should be located so that data are recorded without being obvious to drivers;
3. Observer's vehicle should be concealed or removed from site unless parking is general in the area;
4. Accumulation of on-lookers should be avoided.

To accomplish the above, an unmarked vehicle was used. A hand-held radar speed gun was utilized due to its versatility and ease of concealment from view. One police officer and one engineering staff member, in plain clothes, were assigned to do the survey. The officer would observe a single vehicle as it traveled within the radar range. The speed of the vehicle could be noted on the digital read out. This speed would be marked on the Spot Speed Analysis Sheet by the engineering member. A total of thirty-nine (39) locations were surveyed. (See Figure 1)

B. ANALYSIS OF DATA

Appendix I shows copies of spot speed analysis (two sheets for each location studied). The two columns of data at the top of the first sheet indicate the observed conditions and the observers, and calculated conditions and analyses on the right. Observed conditions include the location of the spot speed survey, the direction of travel of vehicles surveyed (on Ralston Avenue each direction is surveyed separately so that if appropriate, differing directional speed limits can be established), the day of week and the date and time of the survey along with the existing posted speed limit is noted, along with the width of the street surveyed.



FIGURE 1

CITY OF BELMONT AND ADJACENT STREETS			
DATE	1/1/80	BY	W. J. B. / J. B. B.
SPOT SPEED STUDY		SURVEY SITES	
		P. 6	

Calculated values include the 50th percentile speed, the 85th percentile speed, the 10 m.p.h. pace speed, the percent of vehicles observed within the 10 m.p.h. pace speed, the total range of speeds observed, and the Skewness Index. All of these, except range of speeds, were obtained by graphic analysis as shown on the second sheet. These terms are explained as follows:

The 50th Percentile Speed is the speed above and below which 50 percent of the sample speeds lie. This is also known as the median or middle speed. It is a measure of the central tendency of the data.

The 85th Percentile Speed is that speed at or below which 85 percent of the observed vehicles are traveling. It is sometimes referred to as the critical speed. It is a well recognized fact among traffic engineers that most drivers are able to drive at reasonable speeds without the benefit of any speed limits, speed signs, or enforcement. The behavior of traffic is a good indication of the appropriate speed zone which should apply on a particular highway section. It is generally felt that at least 85 percent of the drivers operate at speeds which are reasonable and prudent for the conditions pertaining in each situation. The 85th percentile speed is the one characteristic of traffic speeds most nearly conforming to a safe speed. Therefore, the 85th percentile speed of a spot speed survey is the primary indication of a speed zone which might be imposed subject to the secondary factors of accident experience, traffic volumes, road features and other special situations.

The pace is the 10 miles per hour increment of observed speeds which contains the greatest number of vehicles. In nearly all cases, the 85th percentile speed and the recommended speed limit lie somewhere within the pace, frequently in the middle to upper ranges. It is another indicator that traffic engineers use to determine appropriate speed limits.

The percent of vehicles in the pace speed is an indication of the bunching of vehicular speeds. Ideally, if all vehicles would be traveling at or about the same speed, there would be a reduced likelihood of traffic collisions. In speed analysis, the higher the percent of vehicles within the pace speed the better the speed distribution.

The range of speeds is simply the speed of the fastest and slowest vehicles observed. A large range of speeds, for example, in excess of 30 m.p.h., indicates less favorable conditions than if there were a smaller range. The greater the range of vehicles observed, the more inconsistent the traffic stream and the greater the likelihood of traffic collisions.

The Skewness Index is calculated as a check on the adequacy of the spot speed study to determine if the speed check favors either fast or slow moving traffic. A skewness index of 1.0 indicates symmetry about the median, a value below 1.0 indicates that the distribution is skewed or slanted toward lower speeds, and index above 1.0 is toward higher speeds. A strong skew to high speeds indicates that some geometric factor of the roadway is preventing those vehicles which would normally travel at "excessive or very high speeds" are prevented from doing so. On uncongested roads the distribution of speeds has very little skewness, but travel times are skewed toward longer travel times. On congested roads speed distributions are skewed toward the higher speeds. A skewness of between 0.75 and 1.50 is generally considered to be representative of the observed vehicle speeds.

The Skewness Index is computed from the cumulative percentile values as follows:

$$\text{Skewness Index} = \frac{2 \times (P_{93} - P_{50})}{P_{93} - P_7}$$

where P₉₃, P₅₀ and P₇ are the 93rd, 50th and 7th percentile speeds, respectively.

At the bottom portion of the first sheet (Remarks), are summaries of Accident Experience and Road Features that affect the judgment aspect of setting the final speed limits.

C. ACCIDENT REVIEW

Accident records are essential in speed limit establishment. This fact is shown by the following excerpts on speed, accident and safety:

1. "Speed of Vehicle Preceding Accident - Statistics . . . illustrate the fact that accidents at higher speeds are much more severe."¹
2. "Driver Violations Indicated - 50% of the drivers involved in fatal and injury accidents are reported to have violated a section of the Vehicle Code. Most common violations reported include 'exceeding safe speed but not limit.' In fatal accidents, other violations leading to substantial number of accidents were exceeding stated speed limit . . ."²
3. "Four or more accidents at one location in a year warrant an investigation."³

-
1. Ref. 2 page 9-9, paragraph 6d.
 2. Ibid. page 9-9, paragraph 7a.
 3. Ibid. page 9-11, paragraph 2a.

4. "Accident frequency and severity versus speed - Various safety campaigns aimed at drivers have attempted to persuade them that speed is the cause of almost all accidents, and that if speed can be controlled, accidents will be prevented or reduced. .

Statistics have generally shown that the imposition of a speed limit in an urban area leads to a reduction in serious injury rate and in the overall accident rate on a specific highway section. The most marked general effect of the imposition of speed limits has been a reduction in fatal accidents.

A study made by the Federal Highway Administration reveals the following: Accident-involvement rates are the highest at very low speeds, are lowest at about the average speeds, and increase again at very high speeds. A principal conclusion is that the more a driver deviates from the average speed of traffic, the greater his chance of being involved in an accident . . ."⁴

With these excerpts as guidelines, accidents in all the surveyed streets are reviewed to determine locations of higher accident incidence. Before setting the final limits, the accident rates, accident problems and accident distributions were analyzed. The accident rates are shown under "Remarks" at the bottom of sheet one of Spot Speed Analysis Sheets. (Appendix I)

Table I shows pertinent data used in the accident rate analysis.

The accident rate was calculated with the following formula:

$$R = \frac{A \times 10^6}{365 \times \overline{ADT} \times L}$$

where R = Accident rate in million vehicle - miles,
A = Accidents recorded in one year (the average
of 1978 to 1981 in this study),
 \overline{ADT} = Average daily traffic
L = Length in miles

D. REVIEW OF OTHER CONDITIONS

Variables which influence speeds were reviewed. These variables include:

1. Traffic flow - Volume - ADT (average daily traffic) shown as item 2 under "Remarks" of sheet 1 of Appendix I.
2. Physical Conditions:
 - a. Traffic signals, lanes, medians, etc.
 - b. Stop signs

4. Ref. 1 pages 854-855.

2. Physical Conditions, cont.

- c. Land use or development like residential, business, schools, community facilities, etc.
- d. Curvature, grade, sight distances
- e. Pedestrians, etc.

Conditions considered important in selecting the proper speed limits are summarized in item 3 under "Remarks" of sheet 1 of Appendix I.

Detailed breakdown of the physical conditions on the road, along the road or off the road, conditions that affect the judgment on selecting proper speed limits, are shown under Appendix II.

E. DRIVING THE STREETS

This part of the study is of great significance in the judgment aspect of selecting the final speed limits. The analyst has been driving all the streets surveyed prior to this study. As a final field observation, each of these streets were driven on while "floating" with prevailing traffic to determine the speed of traffic which is reasonable from the driver's standpoint. Equipped with the previously described data analysis, he was particularly cognizant of the 85th percentile speed and the pace speed. He evaluated the appropriateness of the 85th percentile and added the perspective of human judgment to the speed limit setting process. Such factors as roadside development, driveways, parked vehicles, emergency shoulder areas, school and other community centers, horizontal and vertical alignment of the roadway, intersection visibility and control and numerous other less tangible factors - all go into the judgment producing a final recommended limit.

TABLE I
ACCIDENT RATES

<u>LOCATION/SECTION</u>	<u>ADT (1975)</u>	<u>ACCIDENT (1978-1981) AVERAGE</u>	<u>LENGTH (MILE)</u>	<u>ACC. RATE PER MVM*</u>
RALSTON AVENUE				
100-500 Block	21,100	19.125	0.208	11.94
500-1000 "	19,600	39.000	0.303	17.99
1000-1500 "	20,900	11.250	0.530	2.78
1500-1900 "	20,900	17.000	0.436	5.11
1900-2400 "	19,400	12.750	0.568	3.17
2400-2600 "	19,000	7.75	0.341	3.28
2600-2700 "	18,300	7.50	0.379	2.96
2700-3000 "	10,700	3.125	0.606	1.32
300-700 Block, MIDDLE ROAD	2,000	8.00	0.625	17.53
OLD COUNTY ROAD, North of Ralston	8,400	28.125	0.814	11.27
OLD COUNTY ROAD, South of Ralston	6,000	16.625	0.682	11.13
ALAMEDA, North of Ralston	8,400	15.75	0.947	5.42
ALAMEDA, South of Ralston	16,600	27.75	0.606	7.56
2400-2800 Block, HALLMARK DRIVE	4,400	4.00	0.455	5.47
1000-1200 Block, ELMER STREET	-	4.00	0.227	4/year
2100-2600 Block, CIPRIANI BLVD.	7,300	9.50	0.682	5.23
RALSTON OVERPASS	-	1.75		1.75/yr
800-900 Block, RUTH AVENUE	-	10.00	0.208	10/yr
1800-1900 Block, EL VERANO WAY	-	0.75	0.342	.75/yr
300-900 Block, SOUTH ROAD	-	2.50	0.92	2.5/yr
1000-1900 Block, CHULA VISTA DRIVE	2,200	7.75	.682	14.15
200-900 Block, NOTRE DAME AVENUE	2,500	11.00	1.326	9.09
200-900 Block, HILLER STREET	5,500	6.25	0.89	3.50
1000-1200 Block, HILLER STREET	-	2.50	0.227	2.50/yr

* Million - vehicle - miles, unless otherwise indicated.

LOCATION/SECTION	ADT (1975)	ACCIDENT (1978-1981) AVERAGE	LENGTH (MILE)	ACC. RATE PER MVM*
300-600 Block, CHESTERTON AVENUE	-	0.00	0.682	0/yr
2800-3000 Block, SAN JUAN BLVD.	1,000	2.50	0.800	8.56
SHOREWAY ROAD, Within City Limits	-	2.75	0.795	2.75/yr
200-500 Block, DAVEY GLEN ROAD	1,600	15.75	0.341	79.09
2100-2500 Block, CARLMONT DRIVE	3,800	9.75	0.682	10.31
2200-2600 Block, HASTINGS DRIVE	-	2.50	0.900	2.50/yr
LYALL AVE., Continentals to Ralston	-	6.00	0.300	6/yr

* Million - vehicle - miles, unless otherwise indicated.

TABLE I ANNEX

ACCIDENT
EXPERIENCE

1978-1981

ACCIDENT RATES FOR RADAR SURVEYED STREETS 1978, 1979, 1980, AND 1981

<u>ALAMEDA DE LAS PULGAS</u>	1981	1980	1979	1978
Alden Street	1	1	0	2
Arbor Avenue	1	0	1	0
Belle Monti Avenue	0	1	0	0
Carlmont Drive	3	8	6	5
Cipriani Boulevard	2	0	1	0
Chula Vista Drive	1	1	3	0
Coronet Boulevard	0	0	0	0
Covington Road	1	1	3	0
El Verano Way	1	1	2	2
Forest Avenue	0	1	0	0
Garden Court	1	2	1	1
Notre Dame Avenue	0	0	0	0
Mezes Avenue	0	0	1	1
Ralston Avenue	17	28	19	24
San Carlos Avenue	6	6	7	4
Lyons Avenue	1	0	0	0
Valerga Drive	1	3	1	1
	<u>36</u>	<u>53</u>	<u>45</u>	<u>40</u>

CARLMONT DRIVE

Alameda de las Pulgas	3	1	0	0
Hastings Drive	2	2	1	2
Lake Road	2	3	3	2
Merry Moppet	4	2	0	0
Mulberry Court	1	4	0	0
Village Drive	3	1	3	0
	<u>15</u>	<u>13</u>	<u>7</u>	<u>4</u>

CHULA VISTA DRIVE

Alameda de las Pulgas	1	3	2	0
Escondido Way	1	2	2	1
Fernwood Way	0	0	2	1
Ralston Avenue	9	2	1	2
Solana Drive	1	0	1	0
	<u>12</u>	<u>7</u>	<u>8</u>	<u>4</u>

HASTINGS DRIVE

Carlmont Drive	2	2	1	2
Witheridge Road	0	0	0	0
Bridge Court	0	0	0	1
Ridgewood Court	0	1	0	1
	<u>2</u>	<u>3</u>	<u>1</u>	<u>4</u>

ACCIDENT RATES FOR RADAR SURVEYED STREETS, cont.

<u>CIPRIANI BOULEVARD</u>	1981	1980	1979	1978
Buena Vista Avenue	1	0	2	0
Continental Way	0	0	0	1
Carmelita Avenue	2	1	1	0
Lincoln Avenue	1	1	1	2
Palmer Avenue	0	0	0	0
Prindle Road	1	0	1	0
Ralston Avenue	8	5	1	3
San Juan Boulevard	1	2	2	0
Semeria Avenue	0	1	0	0
	<u>14</u>	<u>10</u>	<u>8</u>	<u>6</u>
 <u>CHESTERTON AVENUE</u>				
Oxford Way	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
 <u>DAVEY GLEN ROAD</u>				
El Camino Real	16	16	19	10
Middle Road	1	1	0	0
	<u>17</u>	<u>17</u>	<u>19</u>	<u>10</u>
 <u>ELMER STREET</u>				
O'Neill Avenue	1	0	1	1
Ralston Avenue	4	3	1	3
Waltermire	0	1	0	1
	<u>5</u>	<u>4</u>	<u>2</u>	<u>5</u>
 <u>EL VERANO WAY</u>				
Maywood Drive	0	1	2	0
Fernwood Way	0	0	0	0
Alameda de las Pulgas	0	1	0	1
	<u>0</u>	<u>2</u>	<u>2</u>	<u>1</u>
 <u>LYALL WAY</u>				
Continental Way	0	2	2	1
Lake Road	2	1	1	1
Merry Moppett Lane	0	0	0	0
Ralston Avenue	3	2	4	4
Waterdog Lake Rd.	0	0	0	1
Carlmont	0	1	0	0
	<u>5</u>	<u>6</u>	<u>7</u>	<u>7</u>

ACCIDENT RATES FOR RADAR SURVEYED STREETS, cont.

<u>HILLER STREET</u>	1981	1980	1979	1978
Briarfield Way	1	0	0	0
Biddulph Way	1	0	0	2
Cornish Way	0	0	0	2
Chesterton Ave.	0	1	1	1
Masonic Way	0	1	0	1
O'Neill Avenue	0	1	0	2
Cambridge Street	0	0	1	0
Oxford Way	1	0	0	0
Roxbury Way	0	0	0	1
Sussex	0	0	0	0
Wessex	1	3	2	1
Ralston Ave.	2	0	7	4
	<u>6</u>	<u>6</u>	<u>11</u>	<u>14</u>

HALLMARK DRIVE

Benson Way	0	1	2	5
Ralston Avenue	0	0	1	2
Wakefield Drive	0	0	0	1
Comstock Circle	1	0	1	1
	<u>1</u>	<u>1</u>	<u>4</u>	<u>9</u>

MIDDLE ROAD

El Camino Real	6	6	5	6
Virginia Avenue	0	0	0	0
Central School	0	0	0	0
Cypress Avenue	0	0	0	0
Hainline Drive	0	1	1	0
Willow Lane	0	0	0	1
Laurel Court	0	3	0	0
Davey Glen Road	0	0	0	1
Notre Dame Avenue	0	0	0	0
	<u>6</u>	<u>10</u>	<u>6</u>	<u>8</u>

OLD COUNTY ROAD

Crestview Avenue	0	2	3	3
Daleview Avenue	2	6	3	1
Marine View	8	4	12	6
Mountain View Avenue	1	2	2	5
Masonic Way	9	4	5	7
O'Neill Avenue	0	1	1	2
Harbor Boulevard	5	7	5	2
Waltermire	2	4	2	1
Ralston	13	12	10	9
Sterling View	3	3	1	0
	<u>43</u>	<u>45</u>	<u>44</u>	<u>36</u>

ACCIDENT RATES FOR RADAR SURVEYED STREETS, cont.

<u>NOTRE DAME AVENUE</u>	1981	1980	1979	1978
Alameda de las Pulgas	0	0	0	1
Arbor Avenue	2	0	0	1
Belburn Drive	0	0	0	0
Francis Avenue	0	0	0	0
Folger Drive	1	2	2	1
Hillman Avenue	4	3	1	3
Manzanita Avenue	1	0	0	1
Middle Road	0	0	1	0
Mezes Avenue	1	0	2	1
North Road	1	1	1	0
Ralston Avenue	1	2	3	1
Terrace Drive	0	0	3	1
Ridge Road	0	0	0	0
Belle Monti Avenue	0	0	0	0
Valley View	0	0	1	0
Clee	0	1	0	0
	<u>11</u>	<u>9</u>	<u>14</u>	<u>10</u>

SAN JUAN BOULEVARD

Cipriani Boulevard	0	0	0	0
East Laurel Creek	1	0	0	0
Monte Cresta	2	1	3	1
	<u>3</u>	<u>1</u>	<u>3</u>	<u>1</u>

SOUTH ROAD

Debbie Lane	0	0	1	2
Hainline Drive	0	1	1	0
Holly Road	1	0	1	3
Miramar Terrace	0	1	1	0
Southview Court	1	1	1	0
College View Way	0	1	0	0
	<u>2</u>	<u>4</u>	<u>5</u>	<u>5</u>

RUTH AVENUE

El Camino Real	10	8	3	11
North Road	0	0	1	2
Malcolm Avenue	0	1	1	3
	<u>10</u>	<u>9</u>	<u>5</u>	<u>16</u>

ACCIDENT RATES FOR RADAR SURVEYED STREETS, cont.

<u>SHOREWAY ROAD</u>	1981	1980	1979	1978
Entrance to Holiday Inn	0	0	0	0
Marine World Parkway	1	1	3	1
Sem Lane	0	1	0	2
Ralston Avenue	0	0	2	0
	<u>1</u>	<u>2</u>	<u>5</u>	<u>3</u>

RALSTON AVENUE

Hiller Street	5	0	5	0
Notre Dame College	0	0	2	1
Alameda de las Pulgas	7	5	4	5
S.P. Railroad Crossing	0	2	1	0
Cipriani Boulevard	8	5	1	2
Belmont Canyon Road	1	4	3	6
Highway 101	0	4	2	1
Villa Avenue	6	7	6	5
Sixth Street	8	15	11	12
Avon Street	1	2	1	2
Chevy Street	2	1	1	2
Chula Vista Drive	9	8	6	5
Coronet	0	0	0	0
El Camino Real	21	13	20	23
Hallmark Drive	2	1	0	2
Lyll Way	3	2	4	4
Maywood Drive	1	1	3	2
Notre Dame Avenue	4	0	1	0
Old County Road	22	7	4	4
Tahoe Drive	1	2	2	4
Academy Avenue	2	3	4	3
Christian Drive	2	0	1	0
Continental's Way	4	3	2	6
Davis Drive	6	2	5	4
Elmer Street	4	6	4	3
Granada Street	7	5	9	5
Lassen Drive	0	1	1	1
South Road	3	13	5	2
Pullman Avenue	0	3	3	6
Shoreway Road	0	1	3	1
Furlong Street	0	1	2	2
Hillcrest Drive	0	2	1	4
Irwin Street	0	0	2	0
	<u>129</u>	<u>119</u>	<u>119</u>	<u>117</u>

TOTAL NUMBER OF ACCIDENTS ON ALL STREETS IN BELMONT

318 321 315 300

CHAPTER II

STUDY RESULTS

A. SELECTING THE PROPER SPEED LIMITS

"Experience has shown that the 85th percentile speed is the one characteristic of traffic speeds most nearly conforming to a 'safe and reasonable limit.' Speed limits set higher than the critical speed will make very few additional drivers 'legal' for each 5 mph increment of speed increased. Speed limits set lower than the critical speed will make a large number of drivers 'illegal' for each 5 mph increment speed reduced."⁵ This is demonstrated by the Cumulative Frequency Curve of Ralston Avenue Westbound, 1000-1500 Block (which is almost a normal distribution curve). An increase of 5 miles to 37 mph from the 32 mph 85th percentile speed would "legalize" an additional 15% of the sample traffic, while a decrease of 5 miles to 27 would make "violators" of an additional 40% of the sampled traffic.

It should be noted that speed limits on two-lane local residential streets tend to be somewhat further removed from the critical (85th) speed than those on the multi-lane arterial street without residential frontages. This points out a specific problem area in Belmont (and one which exists in many other cities): the continuing need for enforcement of the 25 mph speed limit in residential districts. Even as high as 70 or 75 percent of motorists were observed traveling in excess of the 25 mph "prima facie" residential speed limit. This does not necessarily mean, though, that the 25 mph limit is inappropriate; merely, that the majority of the motorists sampled were driving imprudently.

For practical purposes, unless warranted by accident experience and other conditions, the 5 mph increment at or immediately below the 85th percentile (or upper limit of the pace) is the numerical value selected for posting a "realistic" and "enforceable" speed limit.

B. SETTING THE FINAL SPEED LIMITS

As a final aid to establishing realistic speed zones (limits), the following practical considerations were kept in mind:

1. Intermediate speed limits are applicable to through routes having positive intersection controls, good signing, striping, and markings to accomodate appreciable volumes of traffic from beyond the immediate neighborhood;

5. Ref. 3, 1976, page 14

B. SETTING THE FINAL SPEED LIMITS, cont.

2. Unusually short zones of less than a half mile in length should be avoided whenever possible;
3. Speed zone changes should be coordinated with visible changes in roadway conditions or roadside development;
4. Speed zoning should be coordinated with adjacent jurisdictions to assure compatibility.

The final recommended speed limits are set as follows:

RALSTON AVENUE - This street is a high volume arterial connecting Highway 101 (Bayshore Freeway) and Highway 280 (Junipero Serra Freeway). It is recommended that the speed limit be changed from 25 mph to 30 mph from South Road to Alameda. With all the statistics in the spot speed analysis and the positive intersection controls, good signing, striping and markings, it is felt that these changes are appropriate. The following is recommended:

WESTBOUND:

From Hiller Street to South Road the 25 mph be maintained.

From South Road to Alameda, change 25 mph to 30 mph. In this area less than 15% of the vehicles are obeying the existing 25 mph limit and it is not felt that the raising of the speed limit on this section will increase the speeds but rather merely bring more motorists within the lawful limit. This is compatible with accident experience and road conditions. There was a big overall reduction in accidents after the improvement of the road despite the subsequent increase in actual speeds.

Between Alameda and Hallmark Drive, maintain the 35 mph limit.

From Hallmark Drive to Junction with Highway 92 (19th Avenue Freeway) maintain 35 mph.

EASTBOUND:

From Christian Drive to Hallmark Drive, maintain 35 mph.

From Hallmark Drive to 300 feet from Pullman Avenue junction, maintain the 35 mph limit. This is compatible with the presence of the Ralston Intermediate School and the business complex on Davis Drive plus the steep downgrade.

EASTBOUND (RALSTON), cont.

Between Alameda and South Road make the 25 mph to 30 mph the same change as the Westbound for this section.

From South Road to Hiller, don't change the existing 25 mph limit.

OVERPASS SECTION: No change is recommended for the posted speed limit of 35 mph.

MIDDLE ROAD - This is a winding, steep grade road with limited sight distances. The existing 25 mph limit is deemed alright as is also shown by the speed study.

OLD COUNTY ROAD - It is recommended that the 25 mph limit be maintained. There is a high accident rate and the land use, residential mixed with business, warrants this limit.

ALAMEDA DE LAS PULGAS - This is an arterial street in the North - South direction. It is felt that no change in the present 25 mph limit be made. The section North of Ralston is narrow and winding with steep grades and limited sight distances. The sample data would warrant setting the limit at 30 mph but this is good only for a limited stretch of the road. For the sake of continuity, set the limit at 25 mph. For the section South of Ralston Avenue, the no-change recommendation is based on the nature of the road-side developments.

HALLMARK DRIVE - This is a collector street that serves a residential area. The 25 mph speed limit is deemed alright. This is recommended to avoid short zones of less than a half mile in length; (data was taken on short tangents).

ELMER STREET - This street is mixed use throughout most of its length. The posted 25 mph limit is considered prudent.

CIPRIANI BOULEVARD - This is a collector street which is narrow, winding (typical Belmont street) with limited sight distances. It is recommended that the existing 25 mph limit be retained.

RUTH AVENUE - This is a short stretch of road connecting a state highway to an uphill residential area. It is felt that the present 25 mph limit is appropriate.

EL VERANO WAY - All the data and judgment lead us to recommend sticking to the existing 25 mph limit.

SOUTH ROAD - This is another narrow and winding collector street. It is recommended that the 25 mph limit will remain.

CHULA VISTA DRIVE - The existing 25 mph speed is being violated by 58% of the sampled vehicles. This does not mean that the limit is low, only, that majority of the motorists are driving imprudently. No change in the limit is recommended.

NOTRE DAME AVENUE - This street is the narrowest of the collector streets in Belmont and the spot speed data seemed out of proportion. This data was taken at a section where the tendency is to rush or speed up (short section). It is recommended that the 25 mph limit will remain.

HILLER STREET AND CHESTERTON STREET - These are residential collector streets with the least curves and the most level grades. It is felt that the 25 mph limit is appropriate in this area.

SAN JUAN BOULEVARD - All the data points to a recommendation of retaining the posted 25 mph limit.

SHOREWAY ROAD - This is a frontage street connecting Belmont with San Carlos. The sample shows that most of the drivers are driving too slow. (Skewness Index is less than 1.0 and more than 30% are below the pace speed). It is recommended that the posted 35 mph limit remain.

DAVEY GLEN ROAD - This street starts from a state highway and goes upgrade to a curve. The posted limit of 25 mph is considered appropriate for this street.

CARLMONT DRIVE - This street is of mixed use of residential and business. It is recommended that the limit be maintained at 25 mph.

LYALL WAY - This street which has a steep downgrade/upgrade connects Continentals Way to Ralston Avenue. With Merry Moppett School on the south side and is recommended that the 25 mph be maintained.

HASTINGS WAY - This street serves a residential area and there is a steep upgrade/downgrade. It is recommended that the 25 mph limit be maintained due to the steepness of road and limited sight distances.

CHAPTER III

RECOMMENDATIONS AND CONCLUSION

Just a few changes are recommended as a result of this study. These are coordinated with the visible changes in the roadway conditions and the roadside development. Ralston Avenue has all these visible changes (improvements), hence, the recommendation for increase in the limits at some sections as shown in Table III.

The "prima facie" speed limits in most of the streets were not raised or lowered as the spot speed data would warrant. This was due to the other conditions in the streets like narrow width, curves, upgrades and downgrades with limited sight distances and the presence of "vintage" trees. These other conditions are recommended for subjects of further study with other methods of "Traffic Safety and Engineering".

Table II and Table III show the final recommendations and conclusion for this study.

SUMMARY OF SPOT SPEED ANALYSIS

<u>LOCATION/SECTION</u>	<u>AVERAGE SPEED 50th</u>	<u>CRITICAL SPEED 85th</u>	<u>10 MPH PACE SPEED</u>	<u>% IN PACE</u>	<u>SKEWNESS INDEX</u>	<u>EXISTING SPEED</u>	<u>RECOMMENDED SPEED</u>
RALSTON AVENUE, WESTBOUND							
100 - 500 Block	27	32	21-31	73.72	1.00	25	25
500-1000 "	29	34	23-33	81.22	1.08	25	25
1000-1500 "	27	32	22-32	92.61	0.92	25	30
1500-1900 "	27	31	22-32	89.76	1.09	25	30
1900-2400 "	34	38	28-38	72.72	0.67	35	35
2400-2600 "	33	40	27-37	64.46	1.00	35	35
2600-2700 "	36	41	31-41	73.52	0.93	35	35
2700-3000 "	34	39	26-36	69.12	0.92	35	35
RALSTON AVENUE, EASTBOUND							
3000-2700 Block	35	39	28-38	81.57	1.17	35	35
2700-2400 "	38	42	34-44	76.74	0.92	35	35
2400-2100 "	37	42	32-42	76.24	0.86	35	35
2100-1500 "	26	29	20-30	87.74	1.09	25	30
1500-1000 "	31	35	26-36	94.84	1.11	25	30
1000 - 500 "	28	32	23-33	82.20	0.92	25	25
500 - 100 "	29	33	23-33	79.40	0.92	25	25
RALSTON OVERPASS	40	45	35-45	63.64	0.67	35	35

LOCATION/SECTION	AVERAGE SPEED 50th	CRITICAL SPEED 85th	10 MPH PACE SPEED	% IN PACE	SKENNESS INDEX	EXISTING SPEED	RECOMMENDED SPEED
300-700 Block, MIDDLE ROAD	23	29	17-27	74.16	1.20	25	25
OLD COUNTY ROAD, North of Ralston	28	31	22-32	82.95	0.83	25	25
OLD COUNTY ROAD, South of Ralston	26	30	19-29	75.14	0.93	25	25
ALAMEDA, North of Ralston	23	25	17.5-27.5	98.00	1.00	25	25
ALAMEDA, South of Ralston	28	33	24-34	83.88	1.08	25	25
2400-2800 Block, HALLMARK DRIVE	26	32	22-32	62.79	0.94	25	25
2800-2900 Block, HALLMARK DRIVE	25	29	20-30	90.20	1.33	25	25
1000-1200 Block, ELMER STREET	23	27	18-28	89.11	1.00	25	25
2100-2600 Block, CIPRIANI BLVD.	25	28	20-30	79.12	0.77	25	25
800 - 900 Block, RUTH AVENUE	29	36	24-34	64.29	1.11	25	25
1800-1900 Block, EL VERANO WAY	22	26	18-28	72.73	1.00	25	25
300 - 900 Block, SOUTH ROAD	24	27	20-30	70.27	1.00	25	25
1000-1900 Block, CHULA VISTA DRIVE	27	33	21-31	81.90	1.07	25	25
2000 - 900 Block, NOTRE DAME AVENUE	26	31	20-30	74.80	1.00	25	25
200 - 900 Block, HILLER STREET	25	30	20-30	80.95	1.17	25	25
1000-1200 Block, HILLER STREET						25	25
300 - 600 Block, CHESTERTON AVENUE	23	29	23-33	41.67	1.12	25	25

<u>LOCATION/SECTION</u>	<u>AVERAGE SPEED 50th</u>	<u>CRITICAL SPEED 85th</u>	<u>10 MPH PACE SPEED</u>	<u>% IN PACE</u>	<u>SKEWNESS INDEX</u>	<u>EXISTING SPEED</u>	<u>RECOMMENDED SPEED</u>
2800-3000 Block, SAN JUAN BLVD.	27	32	22-32	75.00	0.92	25	25
SHOREWAY ROAD, Within City Limits	31	36	25-35	53.06	0.78	35	35
200 - 500 Block, DAVEY GLEN ROAD	25	30	21-31	82.54	1.00	25	25
2100-2500 Block, CARLMONT DRIVE	27	34	23-33	66.67	1.12	25	25
*Continental to Ralston, LYALL WAY	27	32	23-33	81.44	1.08	25	25
*2200-2600 Block, HASTINGS DRIVE	24	29	19-29	79.27	1.17	25	25

*New streets added per Belmont Police Dept.

TABLE III
FINAL RESULTS OF STUDY

<u>LOCATION/SECTION</u>	<u>EXISTING SPEED</u>	<u>CRITICAL SPEED</u>	<u>RECOMMENDED SPEED</u>
RALSTON AVENUE, WESTBOUND			
Hiller Street to South Road	25	33	25
South Road to Alameda	25	31	30
Alameda to Hallmark Drive	35	38	35
Hallmark Drive to Junction Route 92	35	39	35
RALSTON AVENUE, EASTBOUND			
Junction Route 92 to Hallmark Drive	35	39	35
Hallmark Drive to 300' from Pullman Avenue Junction	35	42	35
Alameda to South Road	25	32	30
South Road to Hiller Street	25	32	25
Overpass	35	45	35
MIDDLE ROAD	25	29	25
OLD COUNTY ROAD			
North of Ralston Avenue	25	31	25
South of Ralston Avenue	25	30	25
ALAMEDA			
North of Ralston Avenue	25	25	25
South of Ralston Avenue	25	30	25
HALLMARK DRIVE	25	30	25
ELMER STREET	25	27	25
CIPRIANI BOULEVARD	25	28	25
RUTH AVENUE	25	36	25
EL VERANO WAY	25	36	25

<u>LOCATION/SECTION</u>	<u>EXISTING SPEED</u>	<u>CRITICAL SPEED</u>	<u>RECOMMENDED SPEED</u>
SOUTH ROAD	25	27	25
CHULA VISTA DRIVE	25	31	25
NOTRE DAME AVENUE	25	31	25
HILLER STREET	25	30	25
CHESTERTON AVENUE	25	29	25
SAN JUAN BOULEVARD	25	32	25
SHOREWAY ROAD	35	36	35
DAVEY GLEN ROAD	25	30	25
CARLMONT DRIVE	25	34	25
LYALL WAY	25	32	25
HASTINGS DRIVE	25	29	25

APPENDIX I

SPOT SPEED ANALYSIS

BELMONT SPOT SPEED ANALYSIS

LOCATION 100-500 RALSTON, HILLER TO OLD COUNTY
 DIRECTION WESTBOUND 50TH PERCENTILE SPEED 27
 DATE APRIL 22, 1982 85TH PERCENTILE SPEED 32
 DAY THURSDAY 10 MPH PACE SPEED 21-31
 TIME 0920-0945 PERCENT IN PACE SPEED 73.72
 POSTED SPEED LIMIT 25 RANGE OF SPEEDS 15-40
 STREET WIDTH 45' SKEWNESS INDEX 1.00
 OBSERVER J. SNODGRASS / N. BRICHACEK ANALYSIS BY N. BRICHACEK

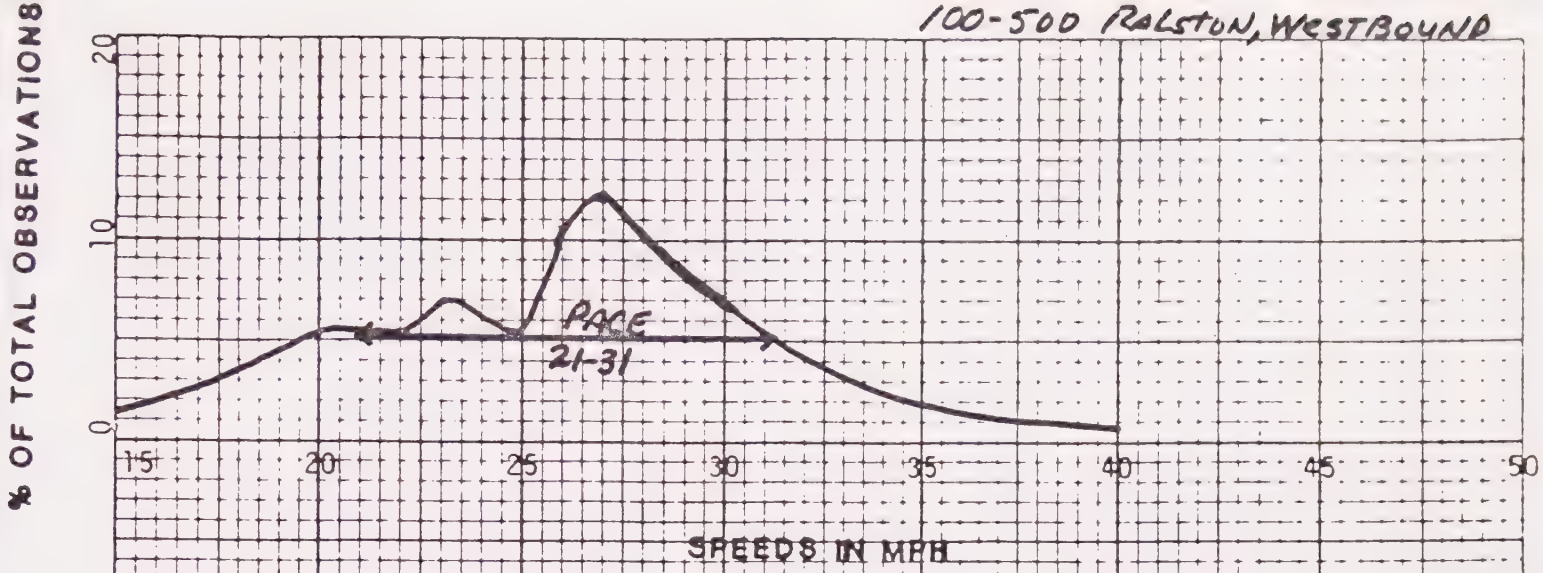
SPEED	NUMBER OF VEHICLES										TOTAL NO.	PERCENT	ACCUM PERCENT
	0	5	10	15	20	25	30	35	40				
9													
8													
7													
6													
5													
4													
3													
2													
1													
0	X										1	0.64	100.00
9	X	X	X								3	1.92	98.08
8													
7	X										1	0.64	97.44
6	X										1	0.64	96.80
5	X	X	X								3	1.92	94.88
4	X	X	X	X							5	3.21	91.67
3	X	X	X	X							4	2.56	89.11
2	X	X	X	X							3	1.92	87.19
1	X	X	X	X	X						7	4.49	82.70
0	X	X	X	X	X	X					11	7.05	75.65
9	X	X	X	X	X	X					8	5.13	70.52
8	X	X	X	X	X	X					7	4.49	66.03
7	X	X	X	X	X	X	X				14	12.18	53.85
6	X	X	X	X	X	X	X	X			17	10.90	42.95
5	X	X	X	X	X	X	X	X			9	5.77	37.18
4	X	X	X	X	X	X	X	X	X		13	8.33	28.85
3	X	X	X	X	X	X	X	X	X		11	7.05	21.80
2	X	X	X	X	X	X	X	X	X		8	5.13	16.67
1	X	X	X	X	X	X	X	X	X		5	3.21	13.46
0	X	X	X	X	X	X	X	X	X		8	5.13	8.33
9	X	X	X								3	1.92	6.41
8	X	X	X	X							4	2.56	3.85
7	X										1	0.64	3.21
6	X	X									2	1.28	1.93
5	X	X									2	1.28	0.65

REMARKS

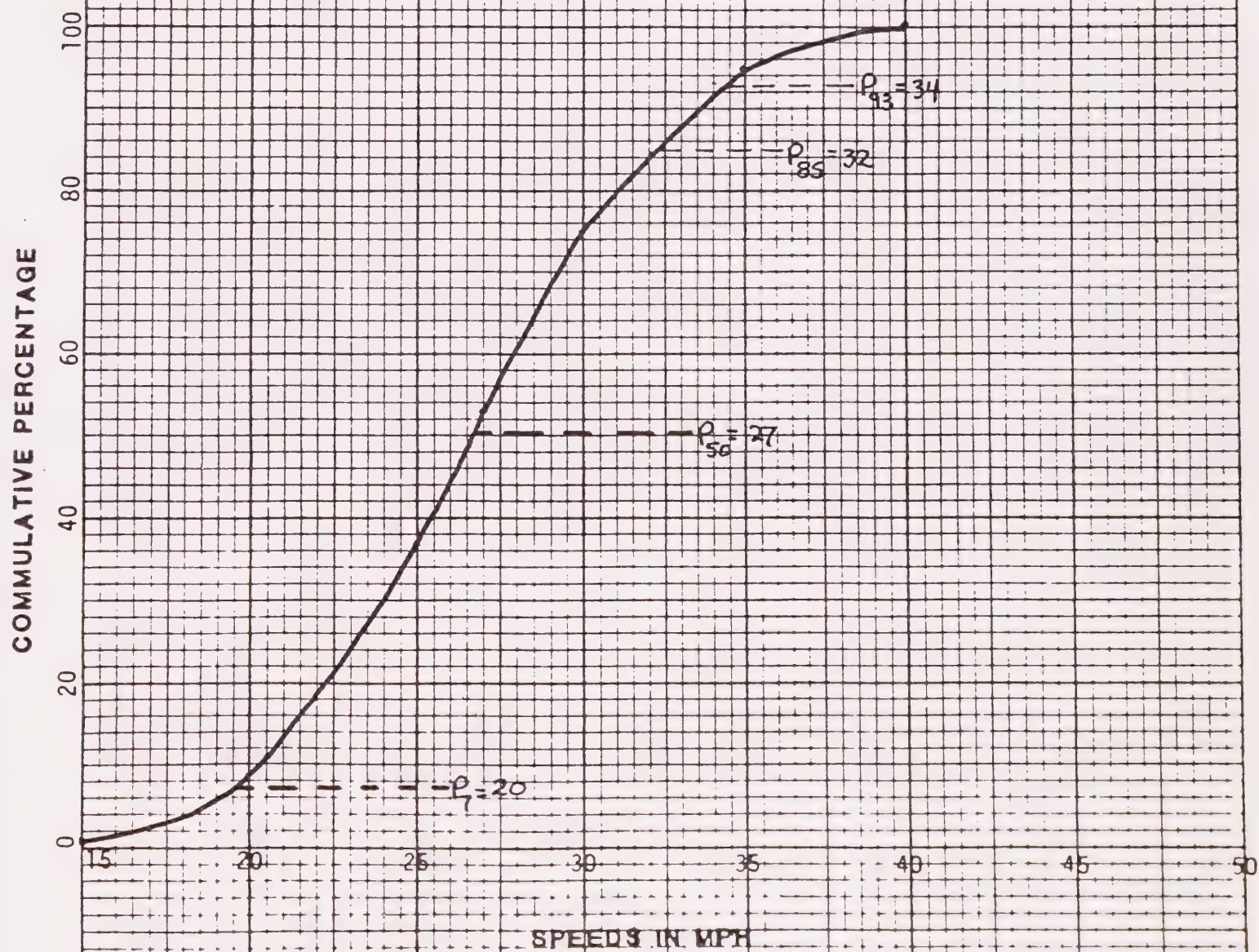
156

1. ACCIDENT RATE = 11.94 MVM
2. TRAFFIC VOLUME = 21,100 ADT*
3. COMBINED RESIDENTIAL & BUSINESS
4. PEDESTRIAN CORSSWALK AT RALSTON

*ADT = AVERAGE DAILY TRAFFIC (1975)



FREQUENCY CURVE



CUMULATIVE FREQUENCY CURVE

BELMONT SPOT SPEED ANALYSIS

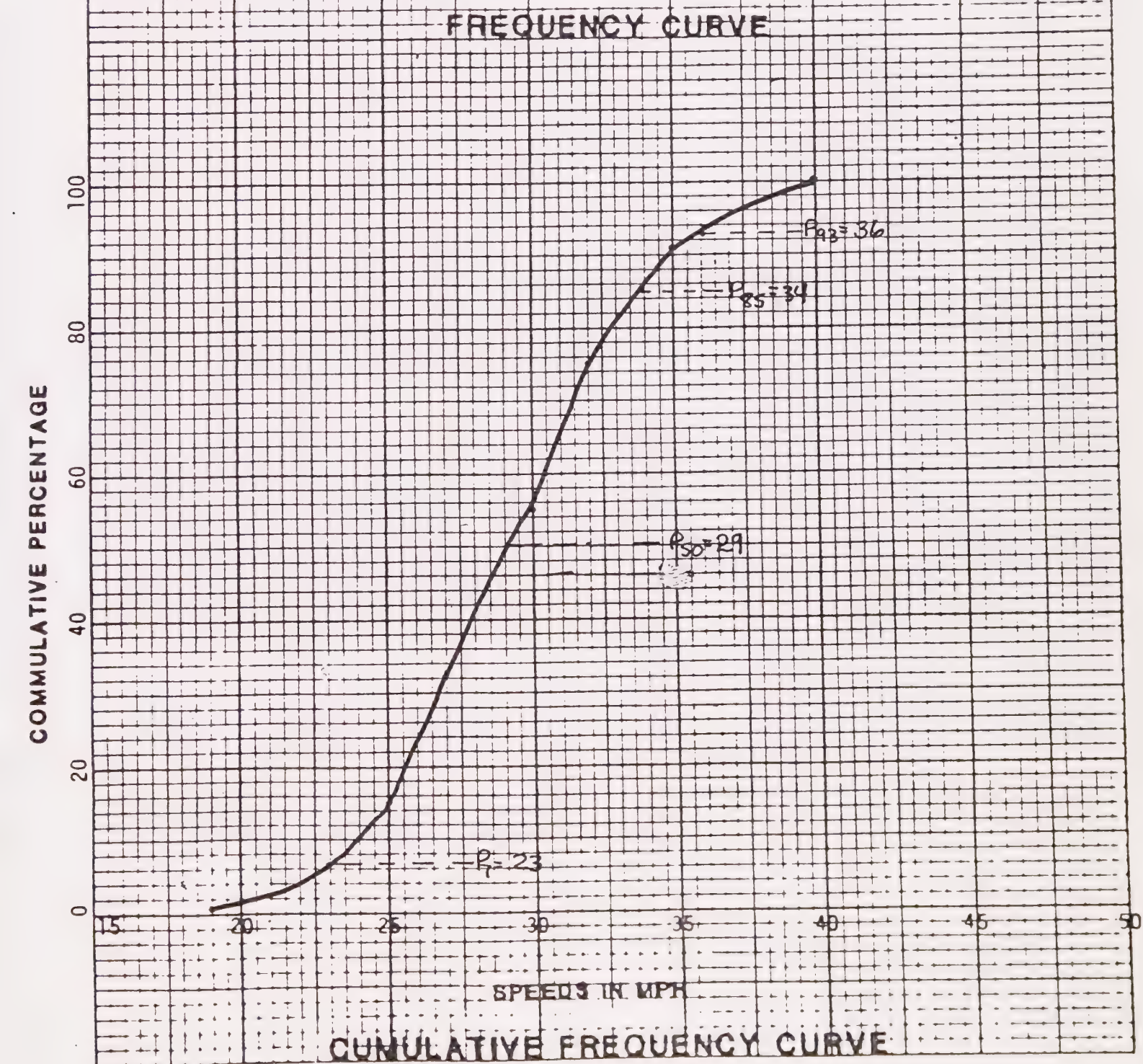
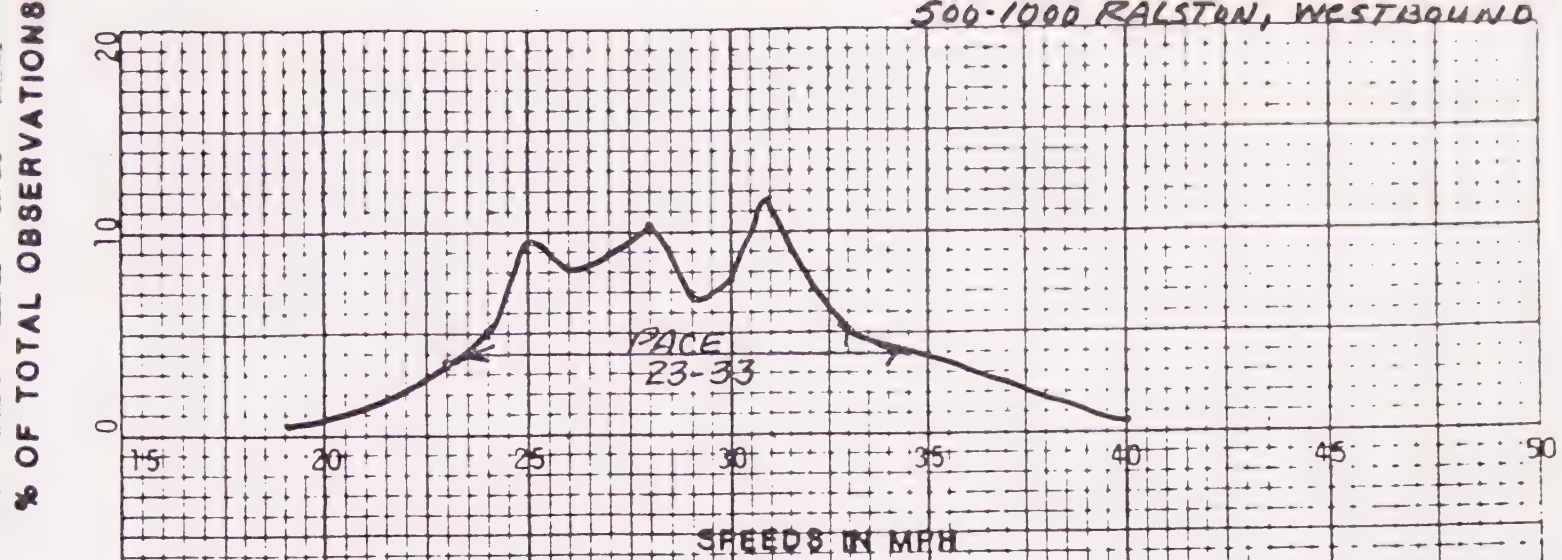
LOCATION 500-1000 RALSTON, OLD COUNTY Rd to South Rd
 DIRECTION WESTBOUND 50TH PERCENTILE SPEED 29
 DATE APRIL 22, 1982 85TH PERCENTILE SPEED 34
 DAY Thursday 10 MPH PACE SPEED 23-33
 TIME 0950-1015 PERCENT IN PACE SPEED 81.22
 POSTED SPEED LIMIT 25 RANGE OF SPEEDS 19-40
 STREET WIDTH 40' SKEWNESS INDEX 1.08
 OBSERVER J. SNODGRASS/N. BRICHACEK ANALYSIS BY N. BRICHACEK

SPEED	NUMBER OF VEHICLES										TOTAL NO.	PERCENT	ACCUM PERCENT
	0	5	10	15	20	25	30	35	40				
49													
48													
47													
46													
45													
44													
43													
42													
41													
40	X										1	0.51	100.00
39	X										1	0.51	99.49
38	X										2	1.02	98.47
37	X	X									5	2.54	95.93
36	X	X	X								6	3.05	92.88
35	X	X	X								3	1.52	91.36
34	X	X	X								8	4.06	87.30
33	X	X	X								10	5.08	82.22
32	X	X	X	X							15	7.61	74.61
31	X	X	X	X	X						23	11.67	62.94
30	X	X	X	X	X	X					15	7.61	55.33
29	X	X	X	X	X	X					13	6.59	48.74
28	X	X	X	X	X	X					20	10.15	38.59
27	X	X	X	X	X	X					13	6.59	32.00
26	X	X	X	X	X	X					16	8.12	23.88
25	X	X	X	X	X	X					18	9.14	14.74
24	X	X	X	X	X	X					10	5.08	9.66
23	X	X	X	X	X	X					7	3.55	6.11
22	X	X	X	X	X	X					7	3.55	2.56
21	X	X	X	X	X	X					3	1.52	1.04
20													
19	X										1	0.51	0.53
18													
17													
16													
15													

REMARKS

197

1. ACCIDENT RATE = 17.99 MVM
2. ADT = 19,600
3. BUSINESS DISTRICT



BELMONT SPOT SPEED ANALYSIS

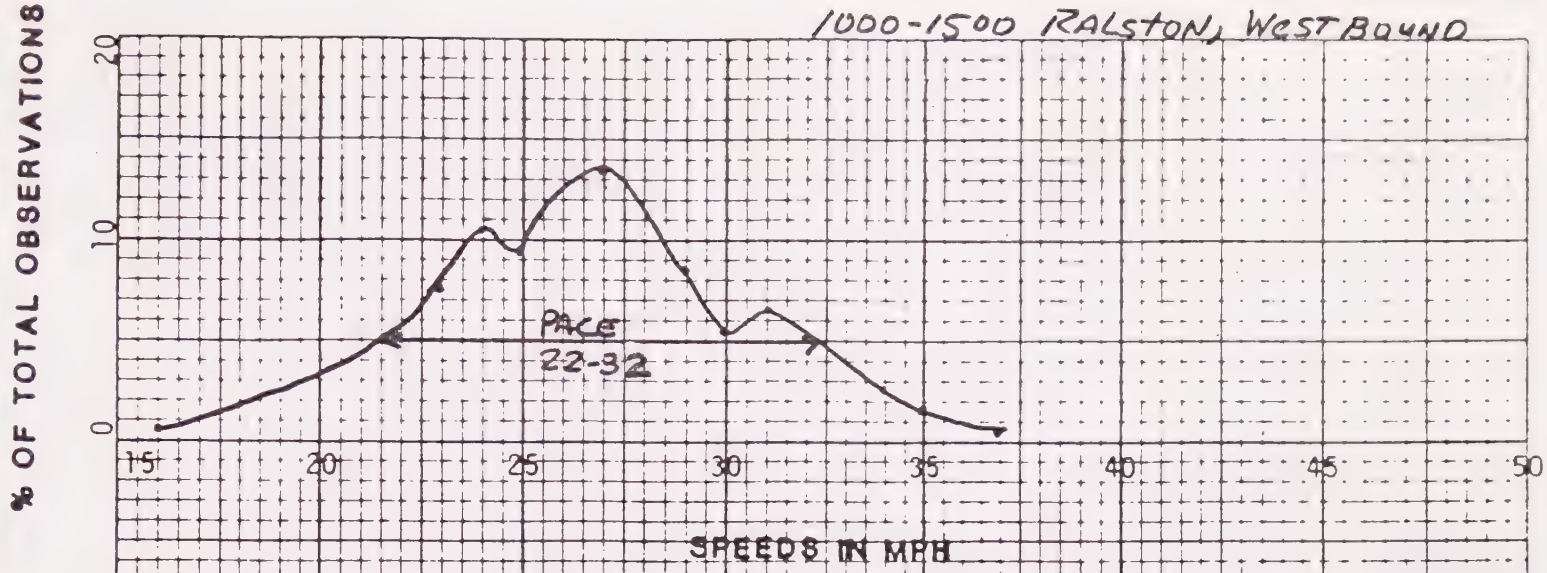
LOCATION 1000-1500 RALSTON, SOUTH Rd. to Notre Dame Avenue
 DIRECTION WESTBOUND 50TH PERCENTILE SPEED 27
 DATE APRIL 22, 1982 85TH PERCENTILE SPEED 32
 DAY Thursday 10 MPH PACE SPEED 22-32
 TIME 1015-1040 PERCENT IN PACE SPEED 92.61
 POSTED SPEED LIMIT 25 RANGE OF SPEEDS 16-37
 STREET WIDTH 38' SKEWNESS INDEX 0.92
 OBSERVER J. Snodgrass / N. BRICHACEK ANALYSIS BY N. BRICHACEK

SPEED	0	5	10	15	20	25	30	35	40	TOTL NQ	PER- CENT	ACCUM PERCENT
49												
48												
47												
46												
45												
44												
43												
42												
41												
40												
39												
38												
37	X									1	0.57	100.00
36												
35	X	X								3	1.70	98.30
34	X	X	X							5	2.84	95.46
33	X	X	X							5	2.84	92.62
32	X	X	X	X						9	5.11	87.51
31	X	X	X	X	X					11	6.25	81.26
30	X	X	X	X	X					9	5.11	76.15
29	X	X	X	X	X					15	8.52	67.63
28	X	X	X	X	X					15	8.52	59.11
27	X	X	X	X	X	X				24	13.64	45.47
26	X	X	X	X	X	X	X			20	11.36	34.11
25	X	X	X	X	X	X	X			17	9.66	24.45
24	X	X	X	X	X	X	X			19	10.80	13.65
23	X	X	X	X	X	X	X			13	7.39	6.26
22	X	X	X	X	X	X	X			6	3.41	2.85
21	X	X	X	X	X	X	X			3	1.70	1.15
20												
19												
18												
17												
16	X									1	0.57	0.58
15												

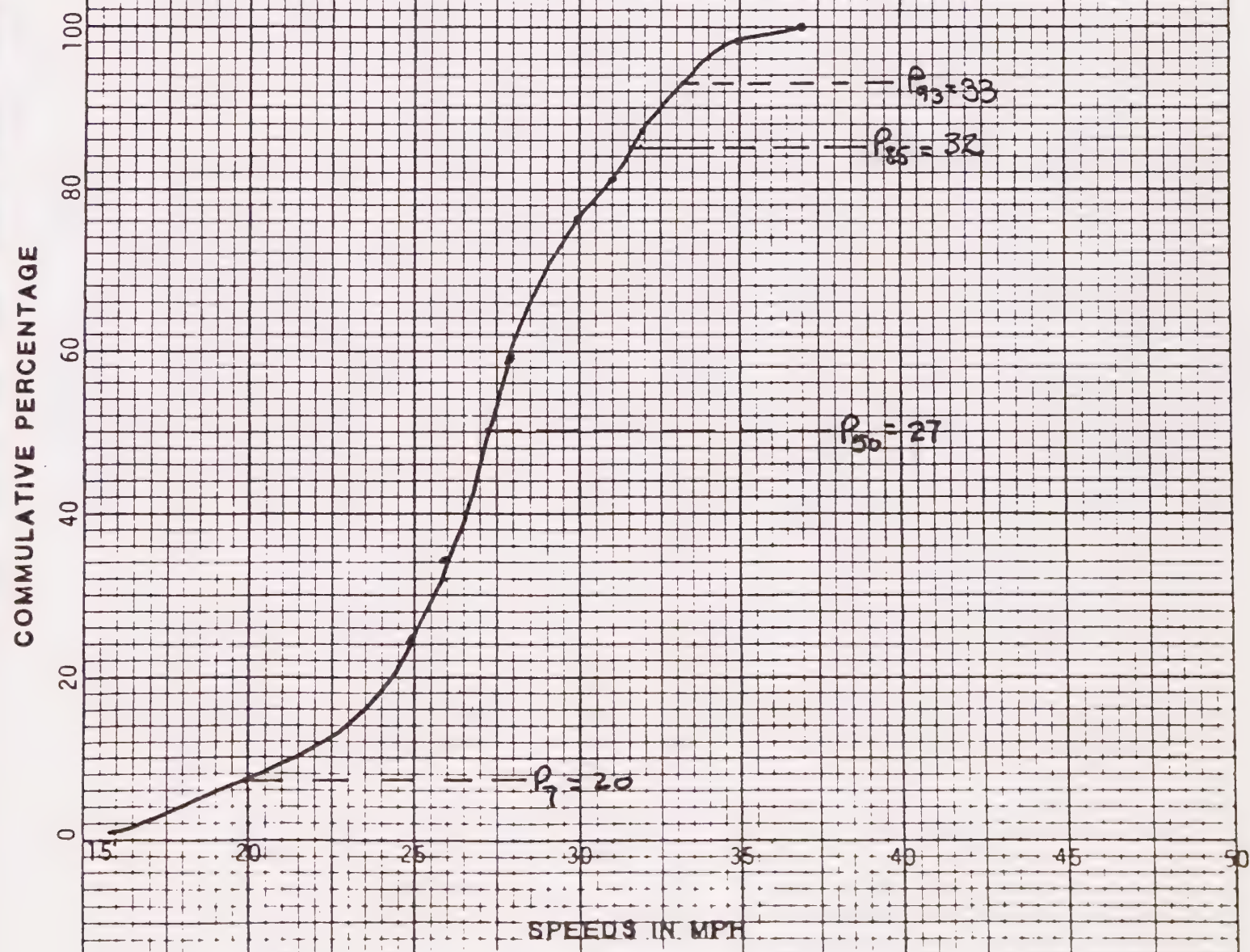
REMARKS

176

1. ACCIDENT RATE 2.78 MVM
2. ADT = 20,900
3. RESIDENTIAL WITH BUS STOPS



FREQUENCY CURVE



CUMULATIVE FREQUENCY CURVE

BELMONT SPOT SPEED ANALYSIS

LOCATION 1500-1900 RALSTON, NOTRE DAME AVE. to ALAMEDA DE LAS PULGAS
 DIRECTION WESTBOUND 50TH PERCENTILE SPEED 27
 DATE APRIL 22, 1987 85TH PERCENTILE SPEED 31
 DAY Thursday 10 MPH PACE SPEED 22-32
 TIME 1040-1105 PERCENT IN PACE SPEED 89.76
 POSTED SPEED LIMIT 25 RANGE OF SPEEDS 19-37
 STREET WIDTH 38' SKEWNESS INDEX 1.09
 OBSERVER J. SNODGRASS / N. BRICHACEK ANALYSIS BY N. BRICHACEK

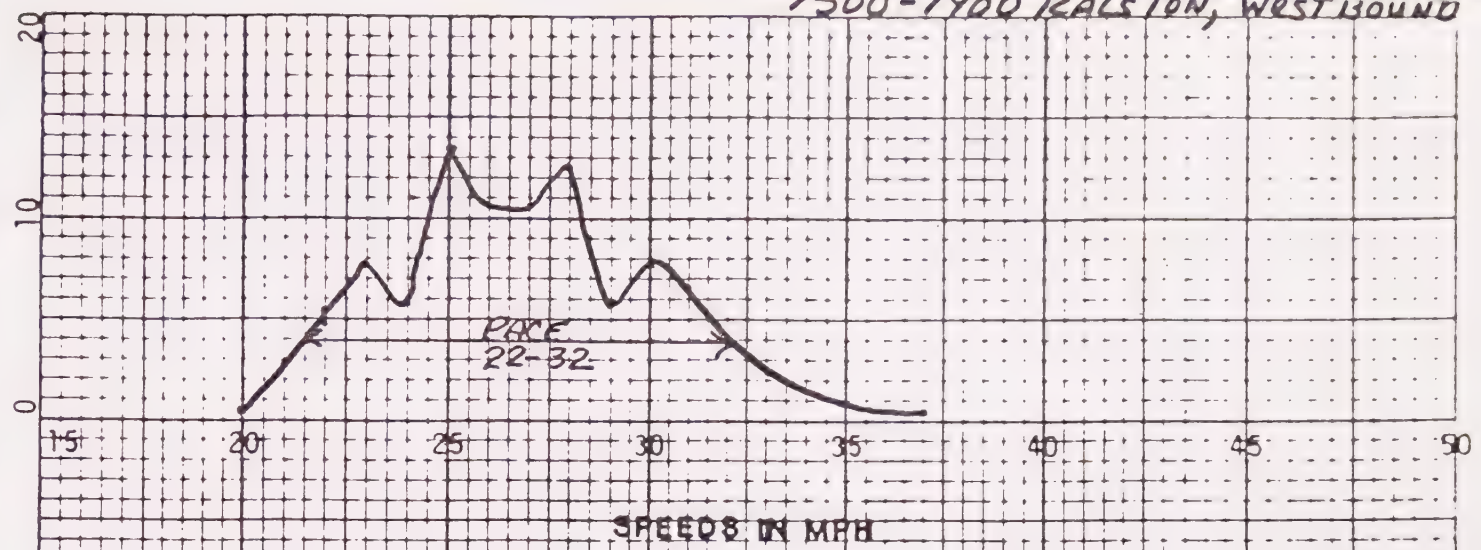
SPEED	NUMBER OF VEHICLES	TOTAL NO.	PERCENT	ACCUM PERCENT
49				
48				
47				
46				
45				
44				
43				
42				
41				
40				
39				
38				
37	X	1	0.49	100.00
36				
35	X X X X	4	1.95	98.05
34	X X X X	3	1.46	96.59
33	X X X X	4	1.95	94.64
32	X X X X X	5	2.44	92.20
31	X X X X X X X X X X	14	6.83	85.37
30	X X X X X X X X X X X X	16	7.80	77.57
29	X X X X X X X X X X X X	12	5.85	71.72
28	X X X X X X X X X X X X X X	26	12.68	59.04
27	X X X X X X X X X X X X X X	22	10.73	48.31
26	X X X X X X X X X X X X X X	22	10.73	37.58
25	X X X X X X X X X X X X X X X X	28	13.66	23.92
24	X X X X X X X X X X X X X X	12	5.85	18.07
23	X X X X X X X X X X X X X X	16	7.80	10.27
22	X X X X X X X X X X X X X X	11	5.37	4.90
21	X X X X X X X X X X X X X X	6	2.93	1.97
20	X	1	0.49	1.48
19	X X	2	0.98	0.50
18				
17				
16				
15				

REMARKS

205

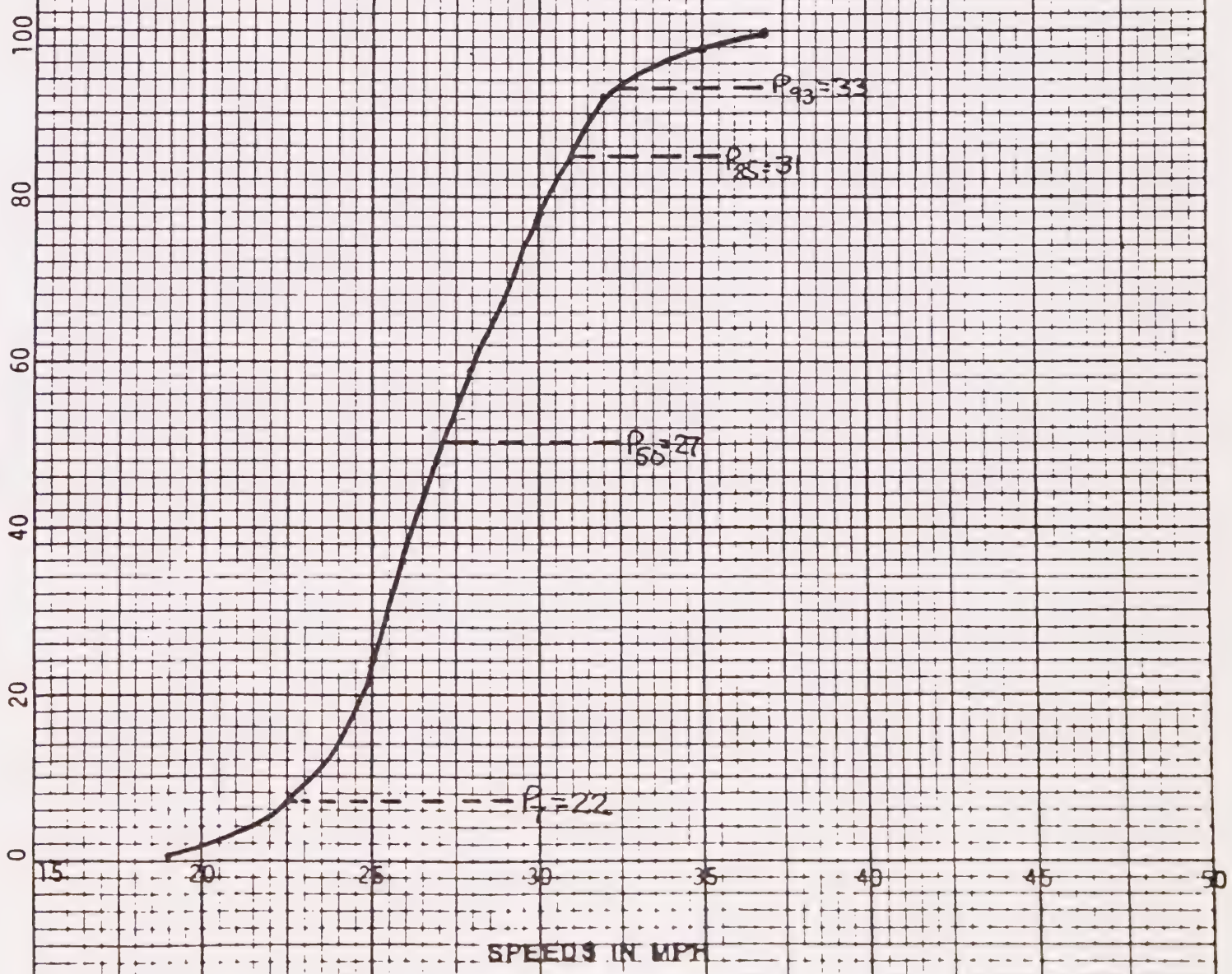
1. ACCIDENT RATE = 5.11 MVM
2. ADT = 20,900
3. RESIDENTIAL TO BUSINESS WITH BARRETT SCHOOL IN BETWEEN

% OF TOTAL OBSERVATIONS



FREQUENCY CURVE

COMMULATIVE PERCENTAGE



CUMULATIVE FREQUENCY CURVE

BELMONT SPOT SPEED ANALYSIS

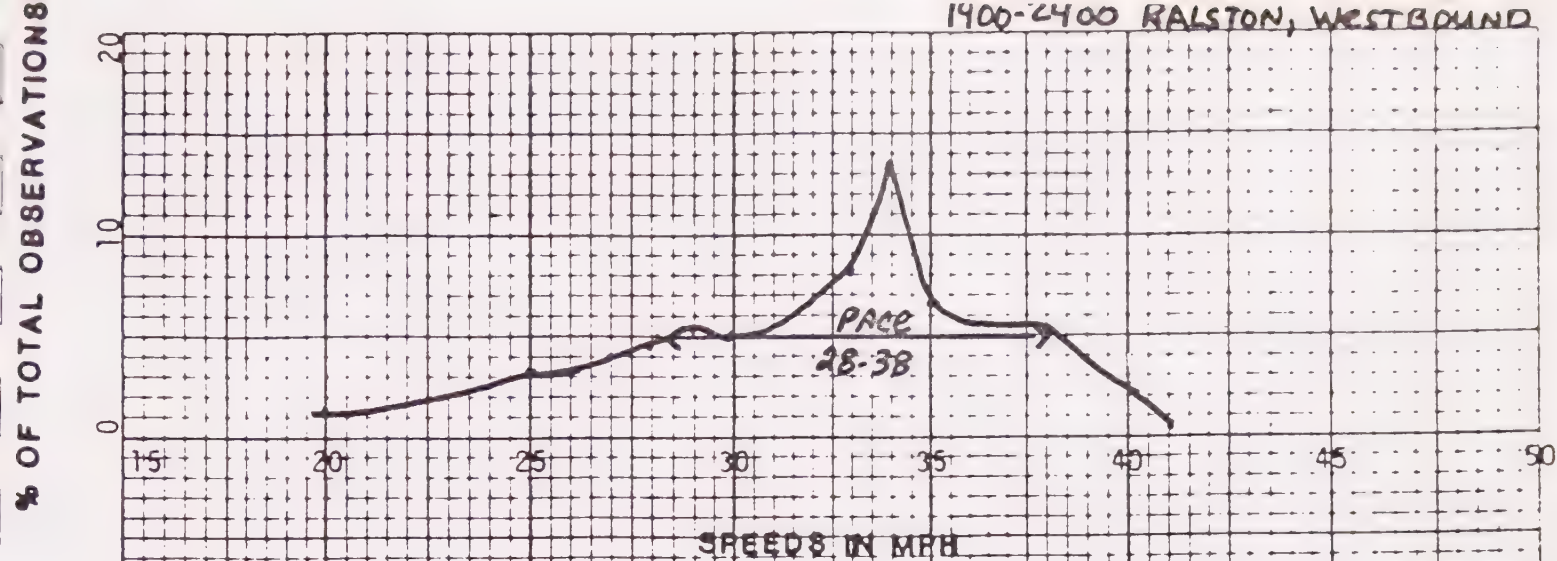
LOCATION 1900-2400 RALSTON, ALAMEDA to CIPRIANI BLVD
 DIRECTION WESTBOUND 50TH PERCENTILE SPEED 34
 DATE MAY 3, 1982 85TH PERCENTILE SPEED 38
 DAY MONDAY 10 MPH PACE SPEED 28-38
 TIME 1020-1050 PERCENT IN PACE SPEED 72.72
 POSTED SPEED LIMIT 35 RANGE OF SPEEDS 15-46
 STREET WIDTH 48' SKEWNESS INDEX 0.67
 OBSERVER J. SNODGRASS / N. BRICHACEK ANALYSIS BY N. BRICHACEK

SPEED	NUMBER OF VEHICLES	TOTAL NO	PERCENT	ACCUM PERCENT
49				
48				
47				
46	X	1	0.45	100.00
45				
44				
43				
42				
41	X	1	0.45	99.55
40	X X X X X	5	2.27	97.28
39	X X X X X X X	8	3.64	93.64
38	X X X X X X X X X	12	5.45	88.19
37	X X X X X X X X X X	12	5.45	82.74
36	X X X X X X X X X X X	14	6.36	76.38
35	X X X X X X X X X X X X	15	6.82	69.56
34	X X X X X X X X X X X X X X X X	30	13.64	55.92
33	X X X X X X X X X X X X X	18	8.18	47.82
32	X X X X X X X X X X X X X X	14	6.36	41.46
31	X X X X X X X X X X X X X	14	6.36	35.10
30	X X X X X X X X X X X X X	11	5.00	30.10
29	X X X X X X X X X X X X	12	5.45	24.65
28	X X X X X X X X X X X	8	3.64	21.01
27	X X X X X X X X X X	9	4.09	16.92
26	X X X X X X X X X	9	4.09	12.83
25	X X X X X X X X	7	3.18	9.65
24	X X X X X X X X	10	4.54	5.11
23	X	1	0.45	4.66
22	X X	2	0.91	3.75
21	X	1	0.45	3.30
20	X X X	3	1.36	1.94
19				
18				
17	X	1	0.45	1.49
16	X	1	0.45	1.04
15	X	1	0.45	0.59

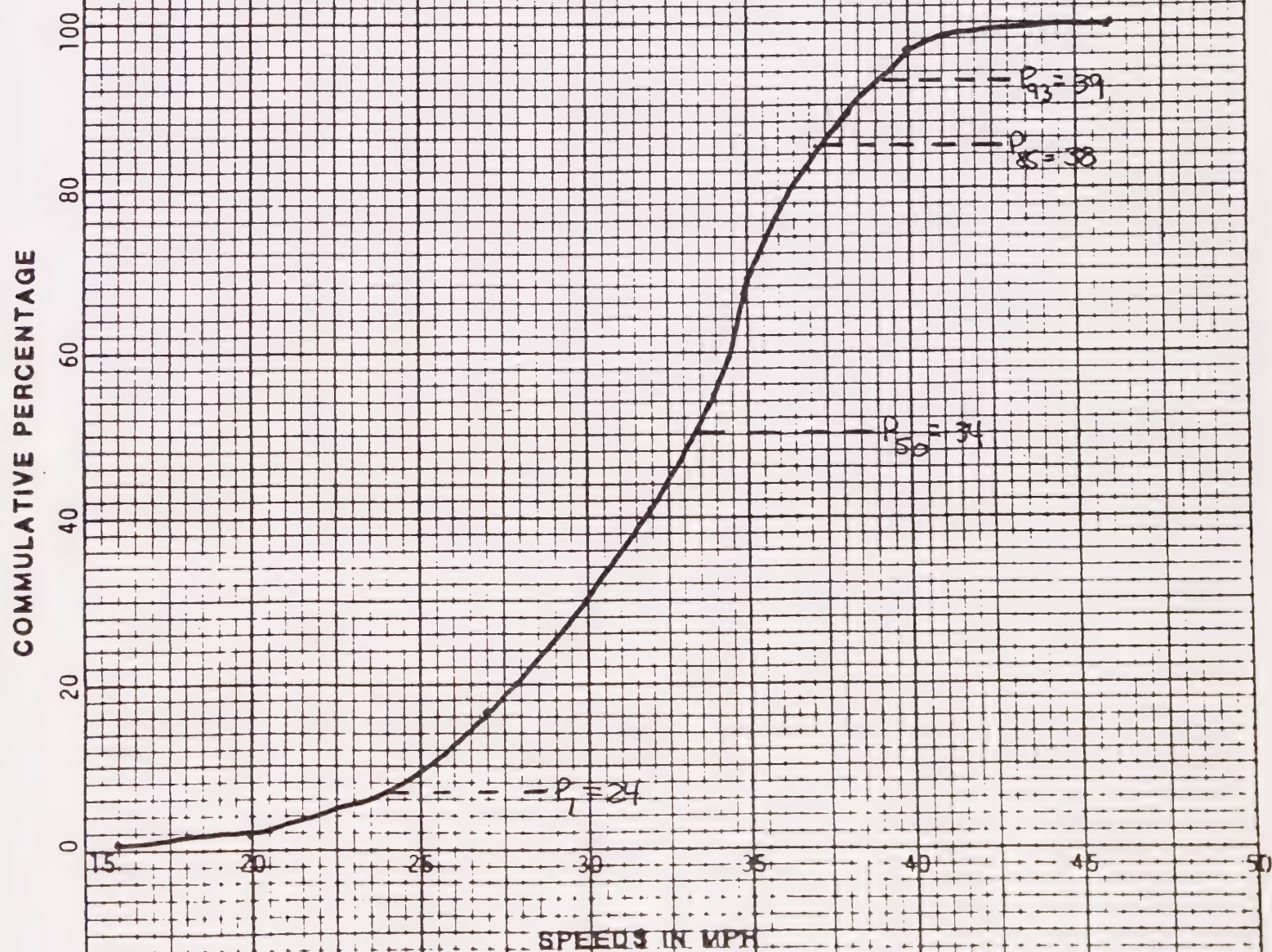
REMARKS

220

1. ACCIDENT RATE = 3.17 MVM
2. ADT = 19,400
3. UPGRADE WITH "S" CURVE TO RIGHT



FREQUENCY CURVE



CUMULATIVE FREQUENCY CURVE

BELMONT SPOT SPEED ANALYSIS

LOCATION 2400-2600 RALSTON, CIRRIANI BLVD to DAVIS DRIVE
 DIRECTION WESTBOUND 50TH PERCENTILE SPEED 33
 DATE APRIL 22, 1982 85TH PERCENTILE SPEED 40
 DAY Thursday 10 MPH PACE SPEED 27-37
 TIME 1105-1130 PERCENT IN PACE SPEED 64.46
 POSTED SPEED LIMIT 35 RANGE OF SPEEDS 15-47
 STREET WIDTH 48' SKEWNESS INDEX 1.00
 OBSERVER J. SNODGRASS / N. BRICHACEK ANALYSIS BY N. BRICHACEK

SPEED	NUMBER OF VEHICLES										TOTAL NO.	PERCENT	ACCUM PERCENT
49													
48											2	1.20	100.00
47	X	X									1	0.60	99.40
46	X	X									2	1.20	98.20
45	X	X									3	1.20	97.00
44	X	X									1	0.60	96.40
43	X	X									5	3.01	92.39
42	X	X	X	X							2	1.20	92.19
41	X	X	X	X							8	4.82	87.37
40	X	X	X	X	X						5	3.01	84.36
39	X	X	X	X	X						4	2.41	81.95
38	X	X	X	X	X						5	3.01	78.94
37	X	X	X	X	X						11	6.43	72.31
36	X	X	X	X	X	X					11	6.43	65.68
35	X	X	X	X	X	X					10	6.02	59.66
34	X	X	X	X	X	X					8	4.82	54.84
33	X	X	X	X	X	X					15	9.04	45.80
32	X	X	X	X	X	X	X				8	4.82	40.98
31	X	X	X	X	X	X					10	6.02	34.96
30	X	X	X	X	X	X					8	4.82	30.14
29	X	X	X	X	X	X					12	7.23	22.91
28	X	X	X	X	X	X					9	5.42	17.49
27	X	X	X	X	X	X					5	3.01	14.48
26	X	X	X	X	X	X					7	4.22	10.26
25	X	X	X	X	X	X					7	4.22	6.04
24	X	X	X	X	X	X							
23											2	1.20	4.84
22	X	X									1	0.60	4.24
21	X	X									2	1.20	3.04
20	X	X									1	0.60	2.44
19	X										1	0.60	1.84
18	X												
17													
16													
15	X										1	0.60	1.24

REMARKS

166

1. ACCIDENT RATE = 3.28 MVM
2. ADT = 19,000
3. ENTRANCE TO BUSINESS COMPLEX AT DAVIS DRIVE
4. UPGRADE

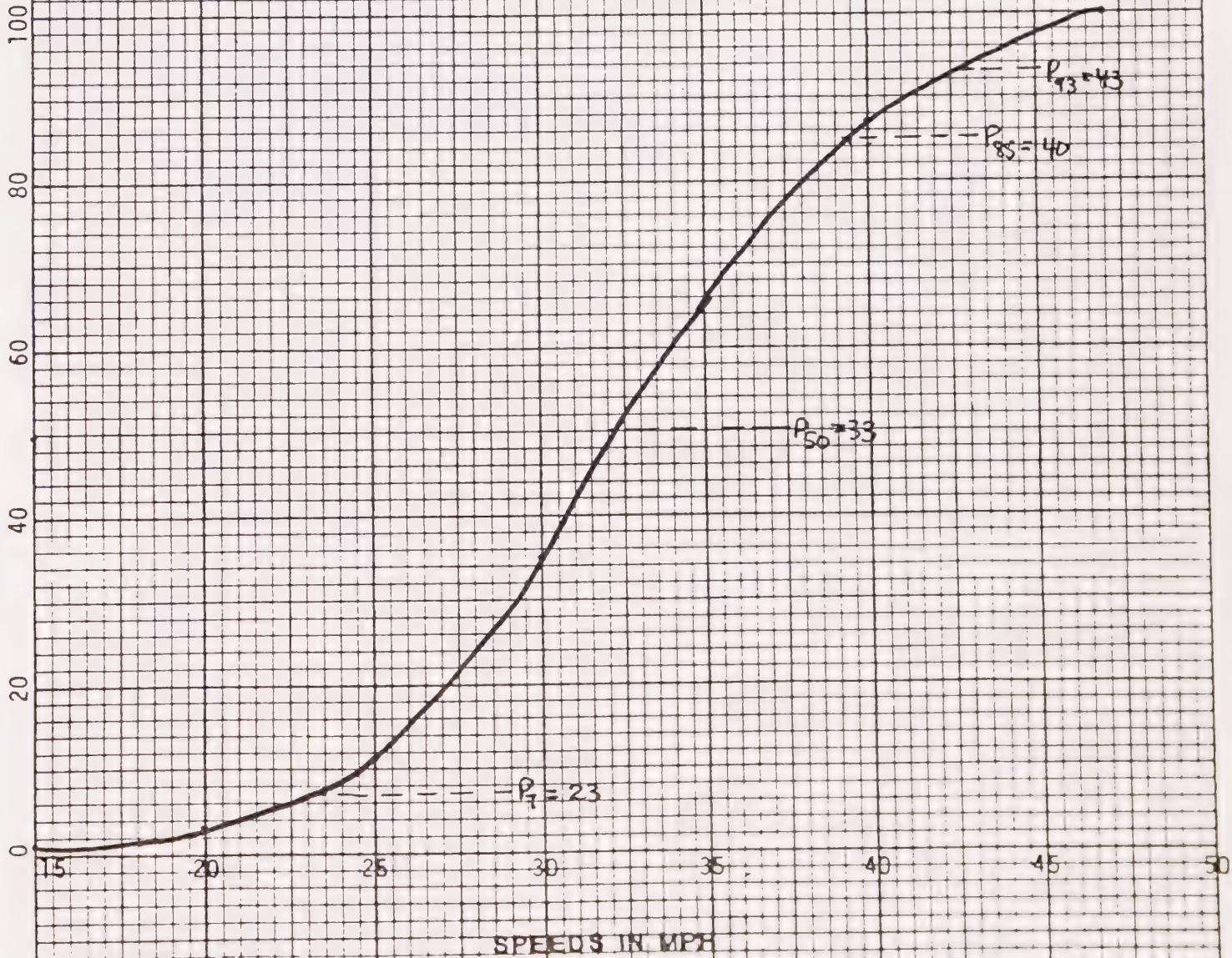
2400-2600 RALSTON, WESTBOUND

% OF TOTAL OBSERVATIONS



FREQUENCY CURVE

COMMULATIVE PERCENTAGE



CUMULATIVE FREQUENCY CURVE

BELMONT SPOT SPEED ANALYSIS

LOCATION 2600-2700 RALSTON, DAVIS Dr to HALLMARK Drive
 DIRECTION WESTBOUND 50TH PERCENTILE SPEED 36
 DATE APRIL 22, 1982 85TH PERCENTILE SPEED 41
 DAY THURSDAY 10 MPH PACE SPEED 31-41
 TIME 1135-1200 PERCENT IN PACE SPEED 73.52
 POSTED SPEED LIMIT 35 RANGE OF SPEEDS 25-49
 STREET WIDTH 48' SKEWNESS INDEX 0.93
 OBSERVER J. SNODGRASS / N. BRICHACEK ANALYSIS BY N. BRICHACEK

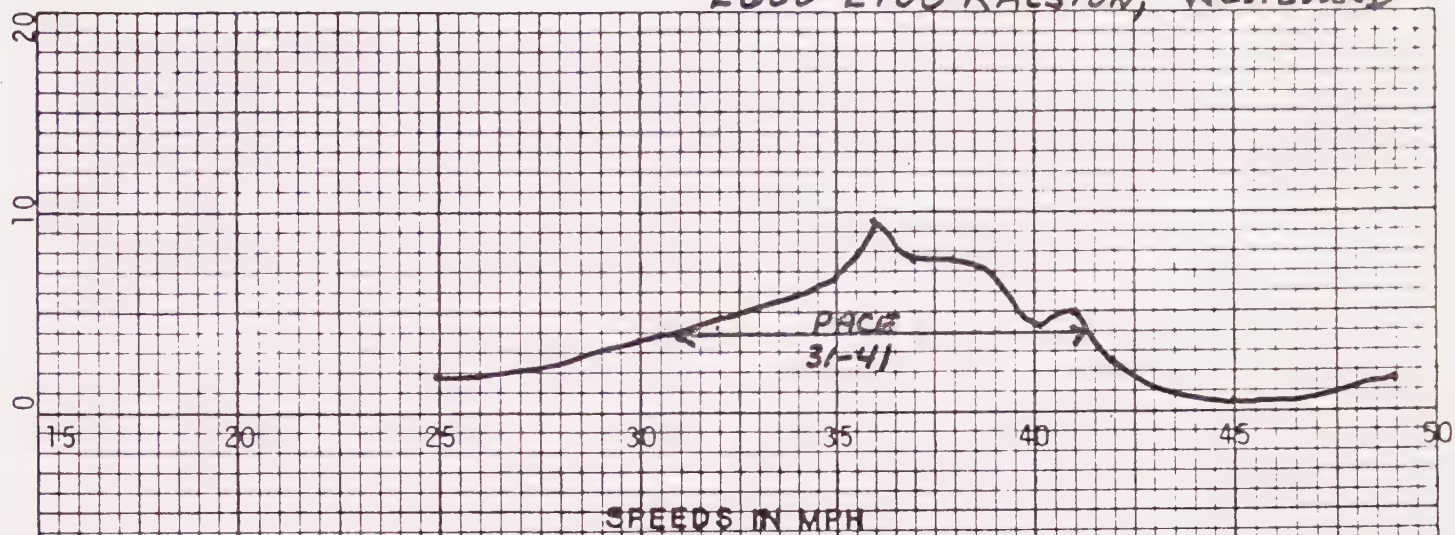
SPEED	NUMBER OF VEHICLES																TOTL NO	PER- CENT	ACCUM PERCENT
49	X	X	X	X													4	1.58	100.00
48																			
47	X	X	X	X													4	1.58	98.42
46	X	X	X														3	1.19	97.23
45	X																1	0.40	96.83
44	X	X	X	X	X	X											7	2.77	94.06
43	X	X	X														3	1.19	92.87
42	X	X	X	X	X												6	2.37	90.50
41	X	X	X	X	X	X	X	X									13	5.14	85.36
40	X	X	X	X	X	X	X	X	X								11	4.35	81.01
39	X	X	X	X	X	X	X	X	X	X							18	7.11	73.90
38	X	X	X	X	X	X	X	X	X	X	X						19	7.51	66.39
37	X	X	X	X	X	X	X	X	X	X	X	X					19	7.51	58.88
36	X	X	X	X	X	X	X	X	X	X	X	X	X				25	9.88	49.00
35	X	X	X	X	X	X	X	X	X	X	X	X	X				17	6.72	42.28
34	X	X	X	X	X	X	X	X	X	X	X	X	X				16	6.32	35.96
33	X	X	X	X	X	X	X	X	X	X	X	X	X				17	6.72	29.24
32	X	X	X	X	X	X	X	X	X	X	X	X	X				15	5.93	23.31
31	X	X	X	X	X	X	X	X	X	X	X	X	X				16	6.32	16.99
30	X	X	X	X	X	X	X	X	X	X	X	X	X				9	3.56	13.43
29	X	X	X	X	X	X	X	X	X	X	X	X	X				10	3.95	9.48
28	X	X	X	X	X	X	X	X	X	X	X	X	X				8	3.16	6.32
27	X	X	X	X													4	1.58	4.74
26	X	X	X														3	1.19	3.55
25	X	X	X	X													5	1.98	1.57
24																			
23																			
22																			
21																			
20																			
19																			
18																			
17																			
16																			
15																			

REMARKS

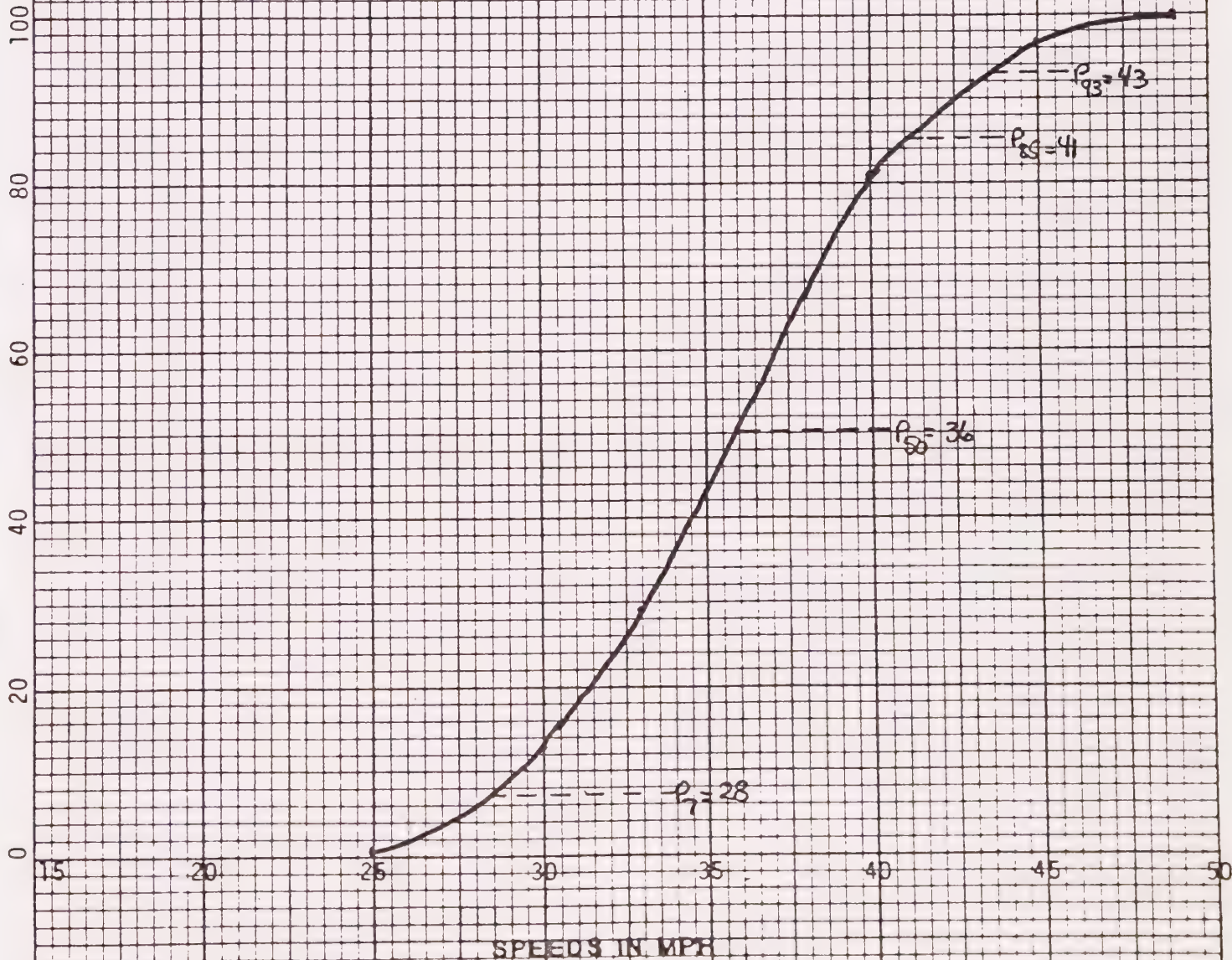
253

1. ACCIDENT RATE = 2.96 MVM
2. ADT = 19,000
3. RESIDENTIAL WITH RALSTON SCHOOL IN BETWEEN

% OF TOTAL OBSERVATIONS



COMMUTATIVE PERCENTAGE



CUMULATIVE FREQUENCY CURVE

BELMONT SPOT SPEED ANALYSIS

LOCATION 2700-3000 RALSTON, HALLMARK Dr. to CHRISTIAN Drive
 DIRECTION WESTBOUND 50TH PERCENTILE SPEED 34
 DATE APRIL 22, 1982 85TH PERCENTILE SPEED 39
 DAY Thursday 10 MPH PACE SPEED 26-36
 TIME 1405-1430 PERCENT IN PACE SPEED 69.12
 POSTED SPEED LIMIT 35 RANGE OF SPEEDS 23-44
 STREET WIDTH 48' SKEWNESS INDEX 0.92
 OBSERVER J. Snodgrass / N. Brichacek ANALYSIS BY N. BRICHACEK

SPEED	NUMBER OF VEHICLES										TOTAL NO.	PERCENT	ACCUM PERCENT
	0	5	10	15	20	25	30	35	40	45			
49													
48													
47													
46													
45													
44	X										1	0.74	100.00
43													
42	X	X									2	1.47	98.53
41	X	X									2	1.47	97.06
40	X	X	X	X							5	3.68	93.38
39	X	X	X	X	X						8	5.88	87.50
38	X	X	X	X	X	X					9	6.62	80.88
37	X	X	X	X	X	X					10	7.35	73.53
36	X	X	X	X	X	X					4	2.94	70.59
35	X	X	X	X	X	X					10	7.35	63.24
34	X	X	X	X	X	X					12	8.82	54.42
33	X	X	X	X	X	X	X				13	9.56	44.86
32	X	X	X	X	X	X	X				9	6.62	38.24
31	X	X	X	X	X	X	X				10	7.35	30.89
30	X	X	X	X	X	X	X				12	8.82	22.07
29	X	X	X	X	X	X	X				9	6.62	15.45
28	X	X	X	X	X	X	X				4	2.94	12.51
27	X	X	X	X	X	X	X				7	5.15	7.36
26	X	X	X	X	X	X	X				4	2.94	4.42
25	X	X									2	1.47	2.95
24													
23	X	X	X								3	2.21	0.74
22													
21													
20													
19													
18													
17													
16													
15													

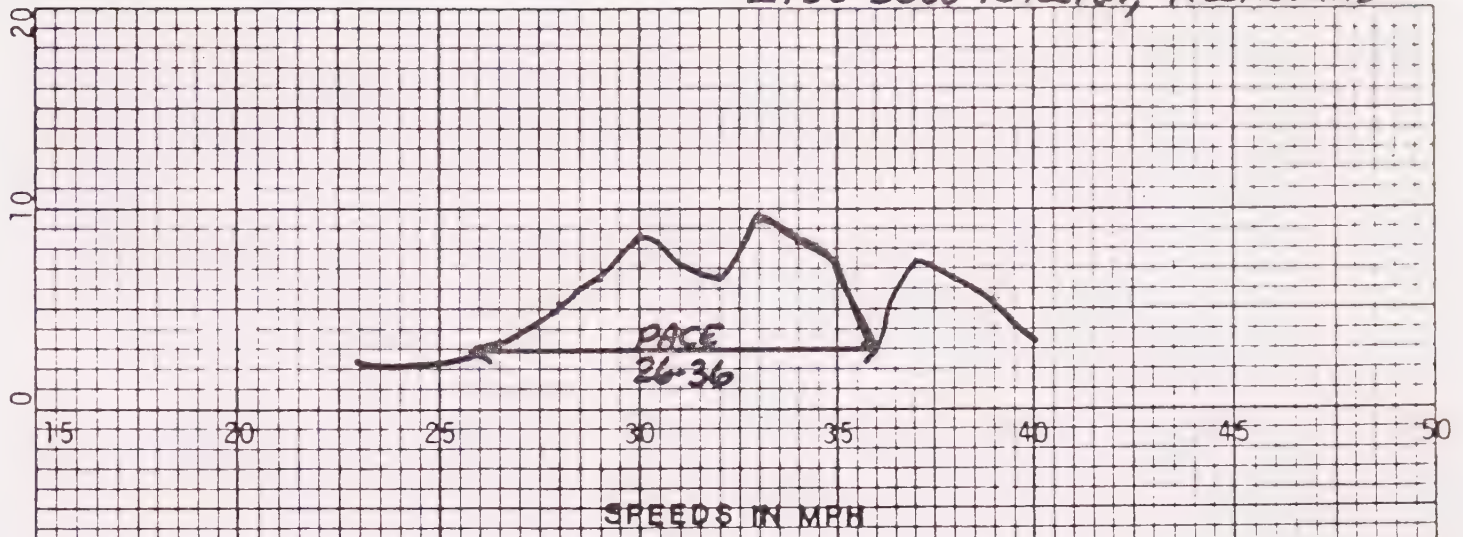
136

REMARKS

1. ACCIDENT RATE = 1.32 MVM
2. ADT = 10,700
3. DOWNGRADE TO 280

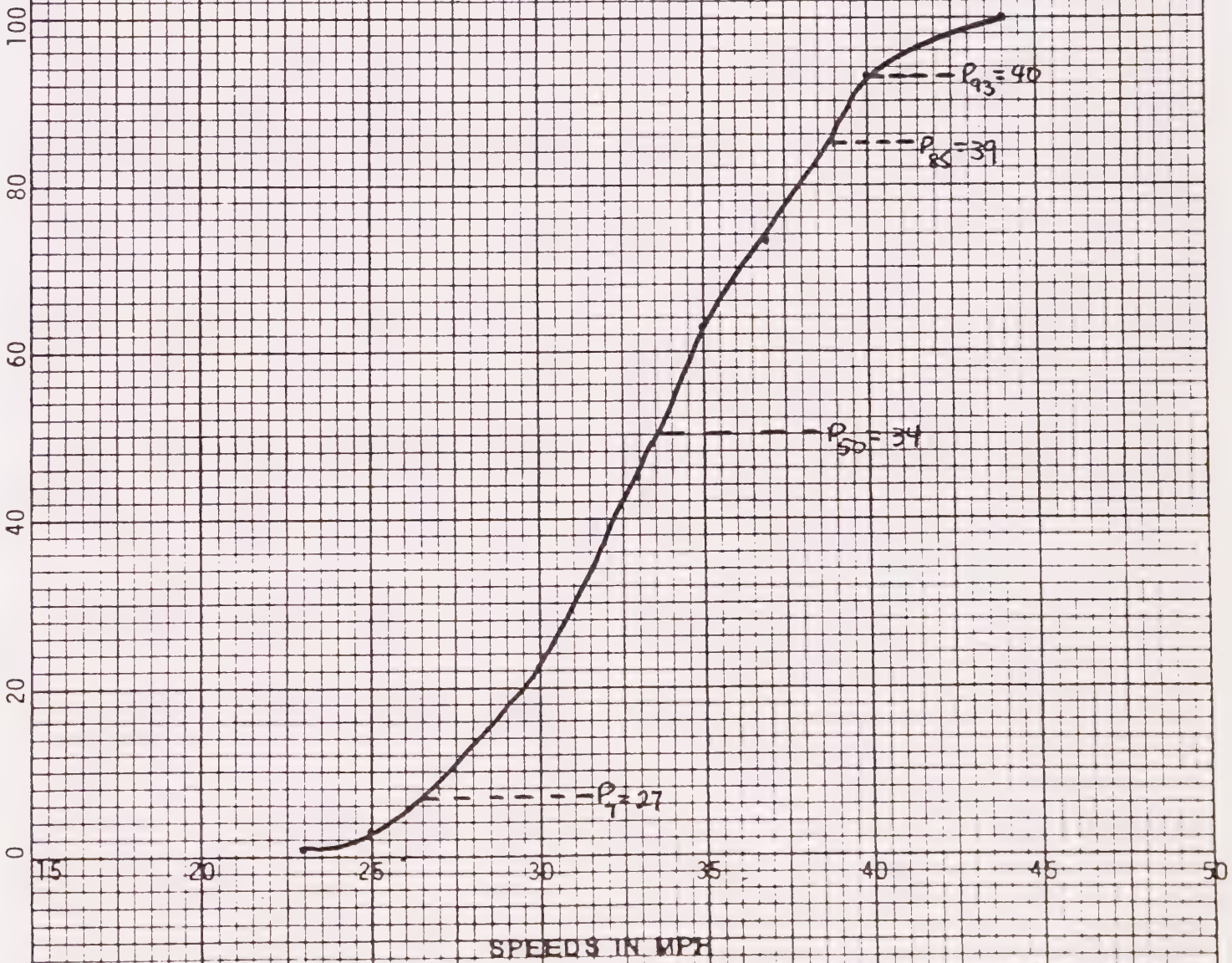
2700-3000 RALSTON, WESTBOUND

% OF TOTAL OBSERVATIONS



FREQUENCY CURVE

CUMULATIVE PERCENTAGE



CUMULATIVE FREQUENCY CURVE

BELMONT SPOT SPEED ANALYSIS

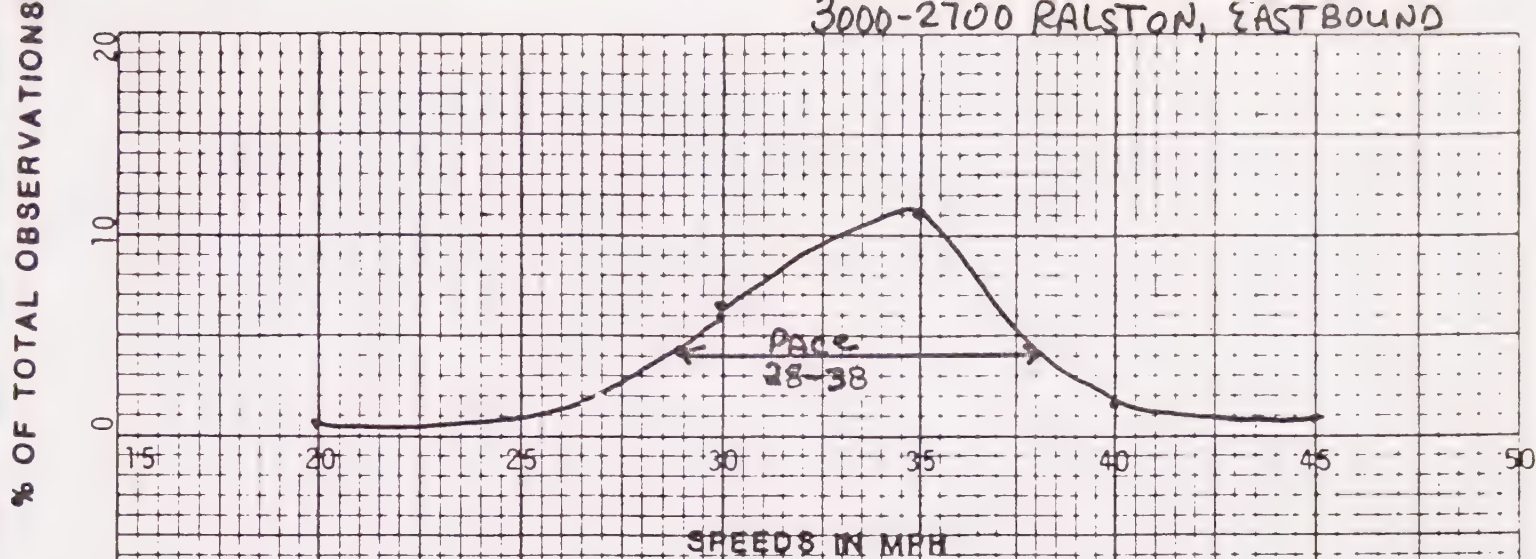
LOCATION 3000-2700 RALSTON, CHRISTIAN Dr to HALLMARK Dr
 DIRECTION EASTBOUND 50TH PERCENTILE SPEED 35
 DATE APRIL 22, 1982 85TH PERCENTILE SPEED 39
 DAY Thursday 10 MPH PACE SPEED 28-38
 TIME 1435-1500 PERCENT IN PACE SPEED 81.57
 POSTED SPEED LIMIT 35 RANGE OF SPEEDS 20-46
 STREET WIDTH 48' SKEWNESS INDEX 1.17
 OBSERVER J. Snodgrass / N. BRICHACEK ANALYSIS BY N. BRICHACEK

PEED	NUMBER OF VEHICLES	TOTL NQ	PER- CENT	ACCUM PERCENT
49				
48				
47				
46	X	1	0.46	100.00
45	XX	2	0.92	99.08
44	XXX	4	1.84	97.24
43	XXXX	7	3.23	94.01
42	XXXXX	3	1.38	92.63
41	XXXXX	5	2.30	90.33
40	XXXXX	3	1.38	88.95
39	XXXXX	8	3.69	85.26
38	XXXXX	18	8.29	76.97
37	XXXXX	18	8.29	68.68
36	XXXXX	22	10.14	58.54
35	XXXXX	24	11.06	47.48
34	XXXXX	32	14.75	32.73
33	XXXXX	11	5.07	27.66
32	XXXXX	17	7.83	19.83
31	XXXXX	11	5.07	14.76
30	XXXXX	14	6.45	8.31
29	XXXXX	6	2.76	5.55
28	XXXXX	4	1.84	3.71
27	XXXX	3	1.38	2.33
26	XX	2	0.92	1.41
25				
24	X	1	0.46	0.95
23				
22				
21				
20	X	1	0.46	0.49
19				
18				
17				
16				
15				

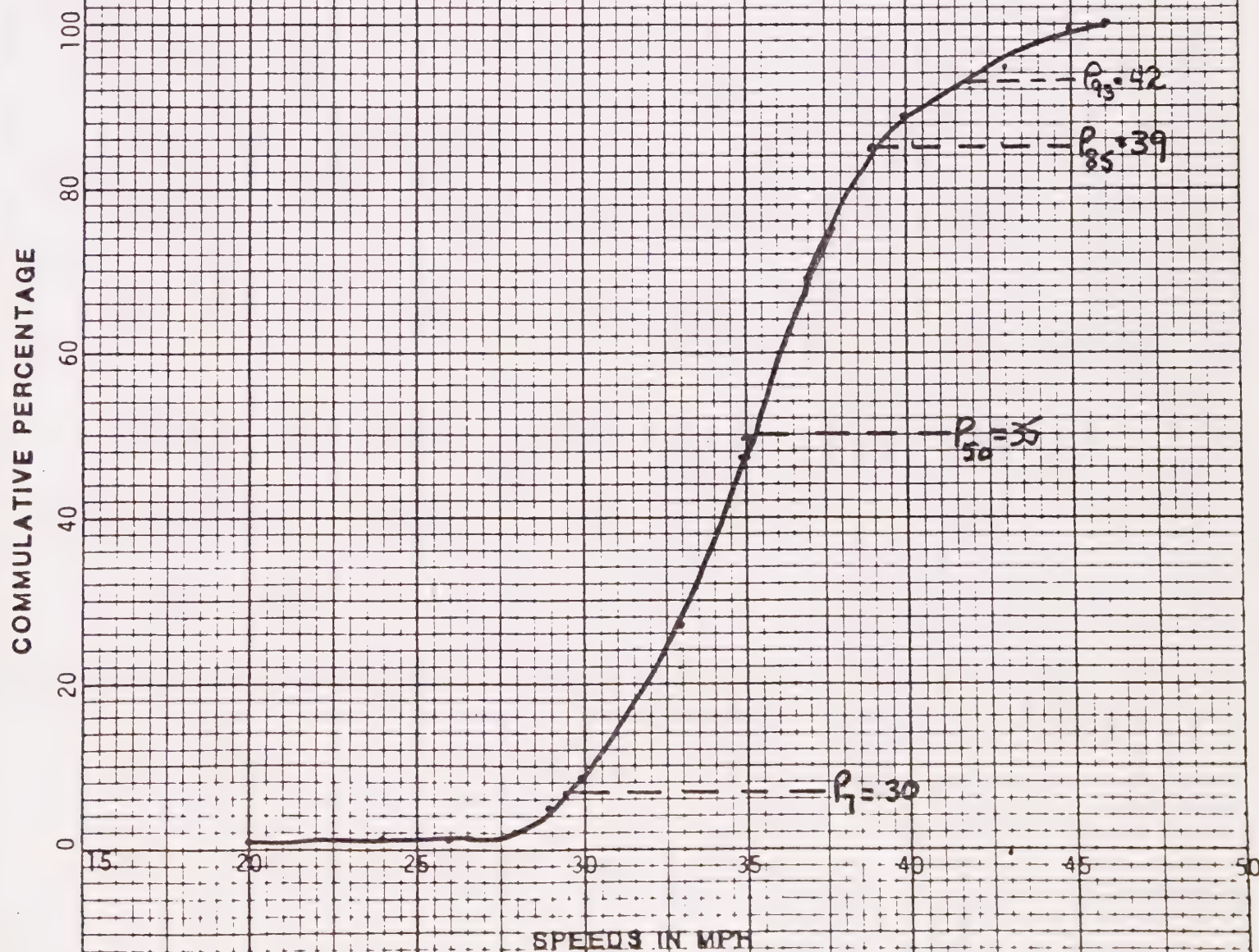
217

REMARKS

1. ACCIDENT RATE = SEE WESTBOUND
2. ADT = " "
3. UPGRADE FROM 280



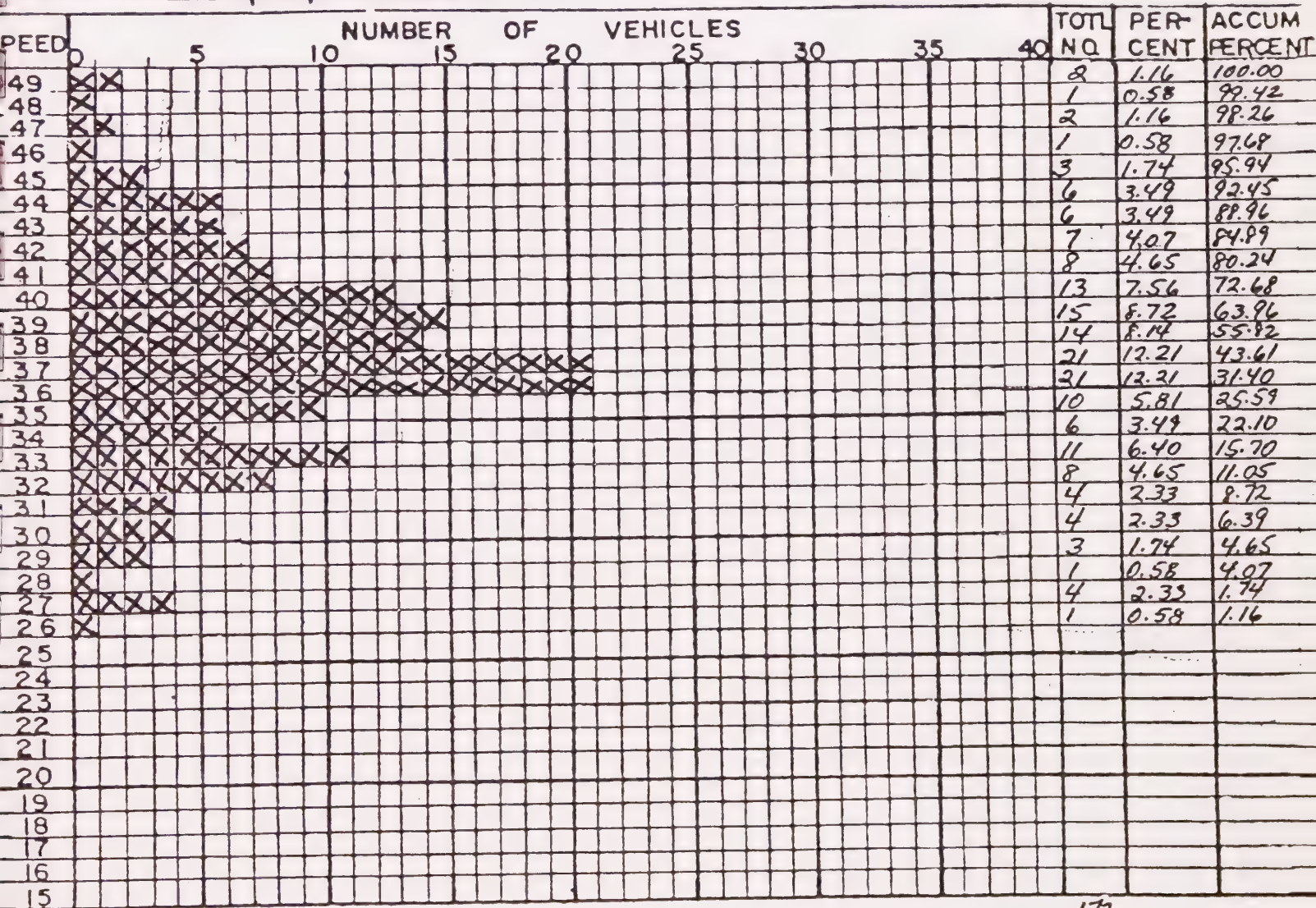
FREQUENCY CURVE



CUMULATIVE FREQUENCY CURVE

BELMONT SPOT SPEED ANALYSIS

LOCATION 2700-2900 RALSTON, HALLMARK Dr. to Cipriani Blvd.
 DIRECTION EASTBOUND 50TH PERCENTILE SPEED 38
 DATE APRIL 23, 1982 85TH PERCENTILE SPEED 42
 DAY FRIDAY 10 MPH PACE SPEED 34-44
 TIME 0930-1000 PERCENT IN PACE SPEED 76.74
 POSTED SPEED LIMIT 35 RANGE OF SPEEDS 26-49
 STREET WIDTH 48' SKEWNESS INDEX 0.92
 OBSERVER J. Snodgrass / N. BRICHACEK ANALYSIS BY N. BRICHACEK

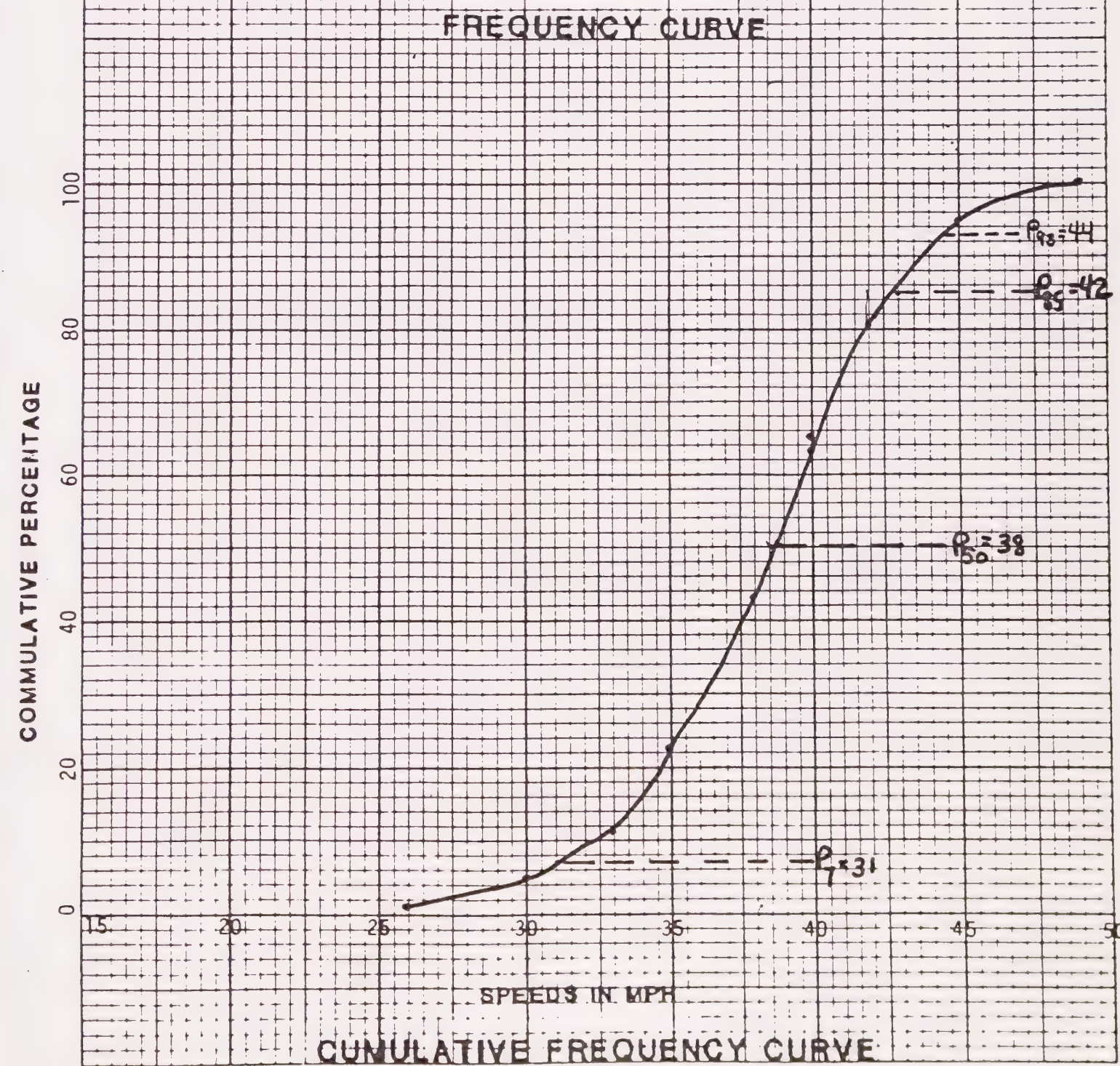
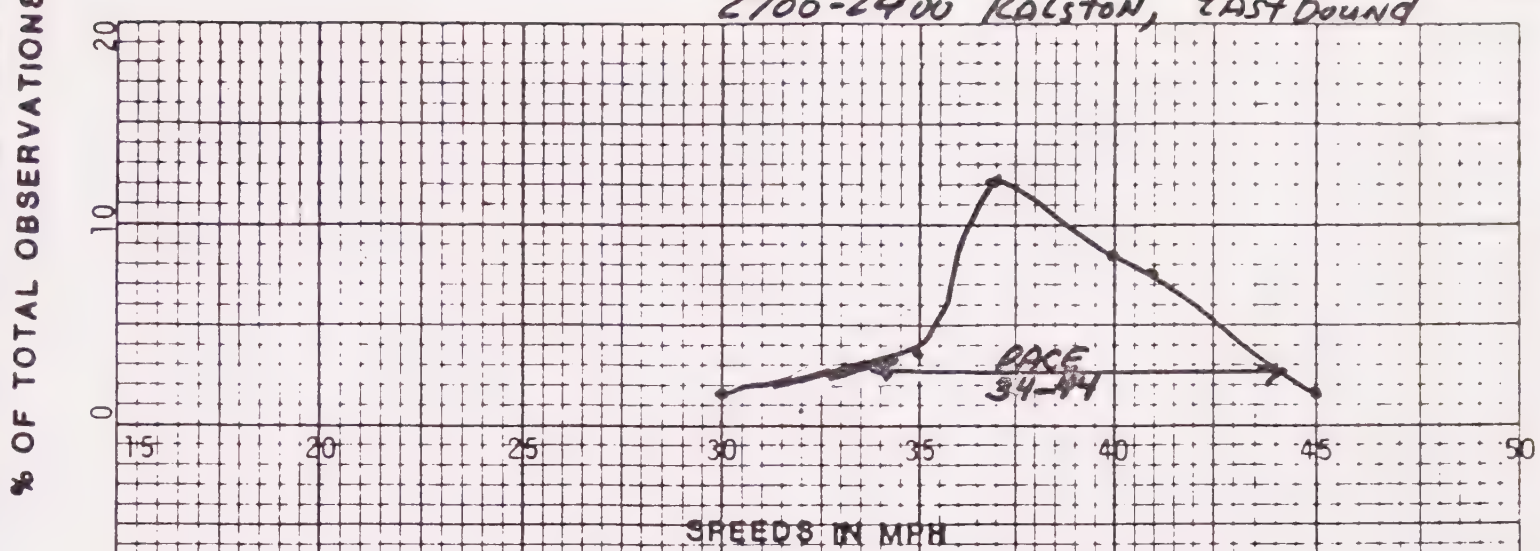


REMARKS

172

1. ACCIDENT RATE = SEE WESTBOUND
2. ADT = " "
3. DOWNGRADE WITH RALSTON SCHOOL ENTRANCE AT RIGHT

2700-2400 Ralston, Eastbound



BELMONT SPOT SPEED ANALYSIS

LOCATION 2400-2100 RALSTON, CIBRIANI BLVD to PULLMAN
 DIRECTION EASTBOUND 50TH PERCENTILE SPEED 37
 DATE MAY 3, 1982 85TH PERCENTILE SPEED 42
 DAY MONDAY 10 MPH PACE SPEED 32-42
 TIME 1130-1200 PERCENT IN PACE SPEED 76.24
 POSTED SPEED LIMIT 35 RANGE OF SPEEDS 24-49
 STREET WIDTH 48' SKEWNESS INDEX 0.86
 OBSERVER J. Snodgrass / N. BRICHACEK ANALYSIS BY N. BRICHACEK

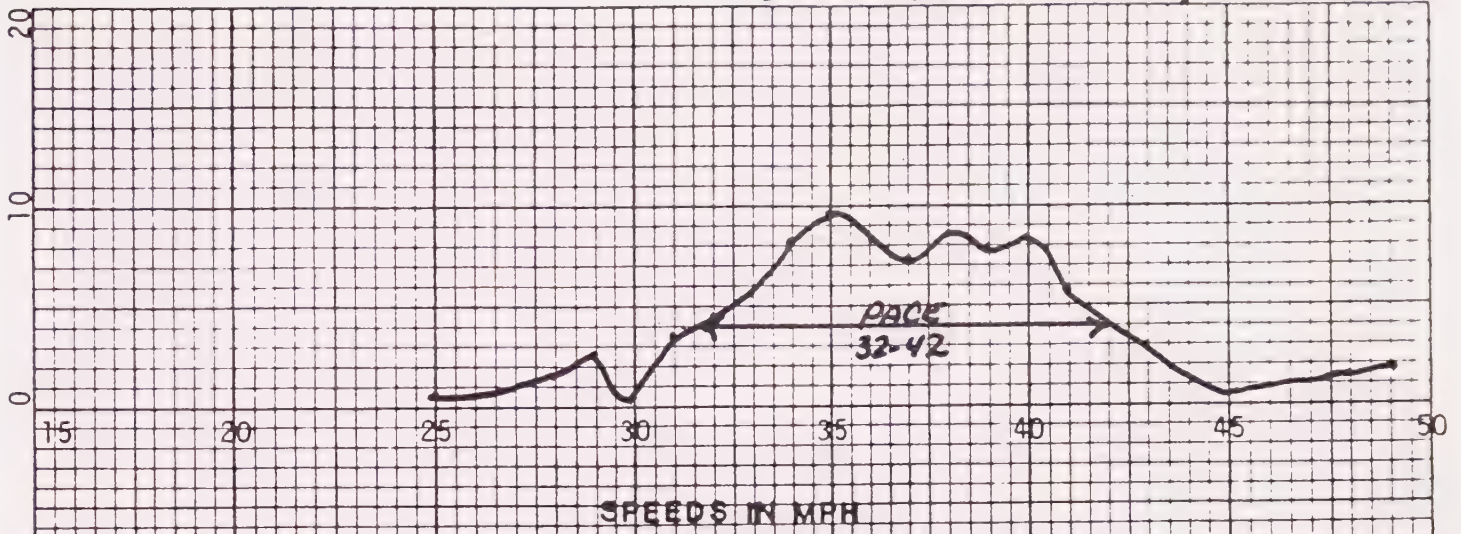
SPEED	NUMBER OF VEHICLES										TOTAL NO.	PERCENT	ACCUM PERCENT
	0	5	10	15	20	25	30	35	40	45			
49	X	X	X	X							5	1.98	100.00
48													
47											2	0.79	99.21
46	X	X									2	0.79	98.42
45	X	X									6	2.38	96.04
44	X	X	X	X	X						10	3.97	92.07
43	X	X	X	X	X						9	3.57	88.50
42	X	X	X	X	X	X					15	5.95	82.55
41	X	X	X	X	X	X	X				21	8.33	74.22
40	X	X	X	X	X	X	X	X			20	7.94	66.28
39	X	X	X	X	X	X	X	X	X		22	8.73	57.55
38	X	X	X	X	X	X	X	X	X		19	7.54	50.01
37	X	X	X	X	X	X	X	X	X		21	8.33	41.68
36	X	X	X	X	X	X	X	X	X		25	9.92	31.76
35	X	X	X	X	X	X	X	X	X		21	8.33	23.43
34	X	X	X	X	X	X	X	X	X		14	5.56	17.87
33	X	X	X	X	X	X	X	X	X		12	4.76	13.11
32	X	X	X	X	X	X	X	X	X		9	3.57	9.54
31	X	X	X	X	X	X	X	X	X		2	0.79	8.75
30	X	X	X	X	X	X	X	X	X		7	2.78	5.97
29	X	X	X	X	X	X	X	X	X		4	1.59	4.38
28	X	X	X	X	X	X	X	X	X		1	0.40	3.98
27	X	X	X	X	X	X	X	X	X		2	0.79	3.19
26	X	X	X	X	X	X	X	X	X		2	0.79	2.40
25	X	X	X	X	X	X	X	X	X		1	0.40	2.00
24	X	X	X	X	X	X	X	X	X				
23													
22													
21													
20													
19													
18													
17													
16													
15													

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REMARKS

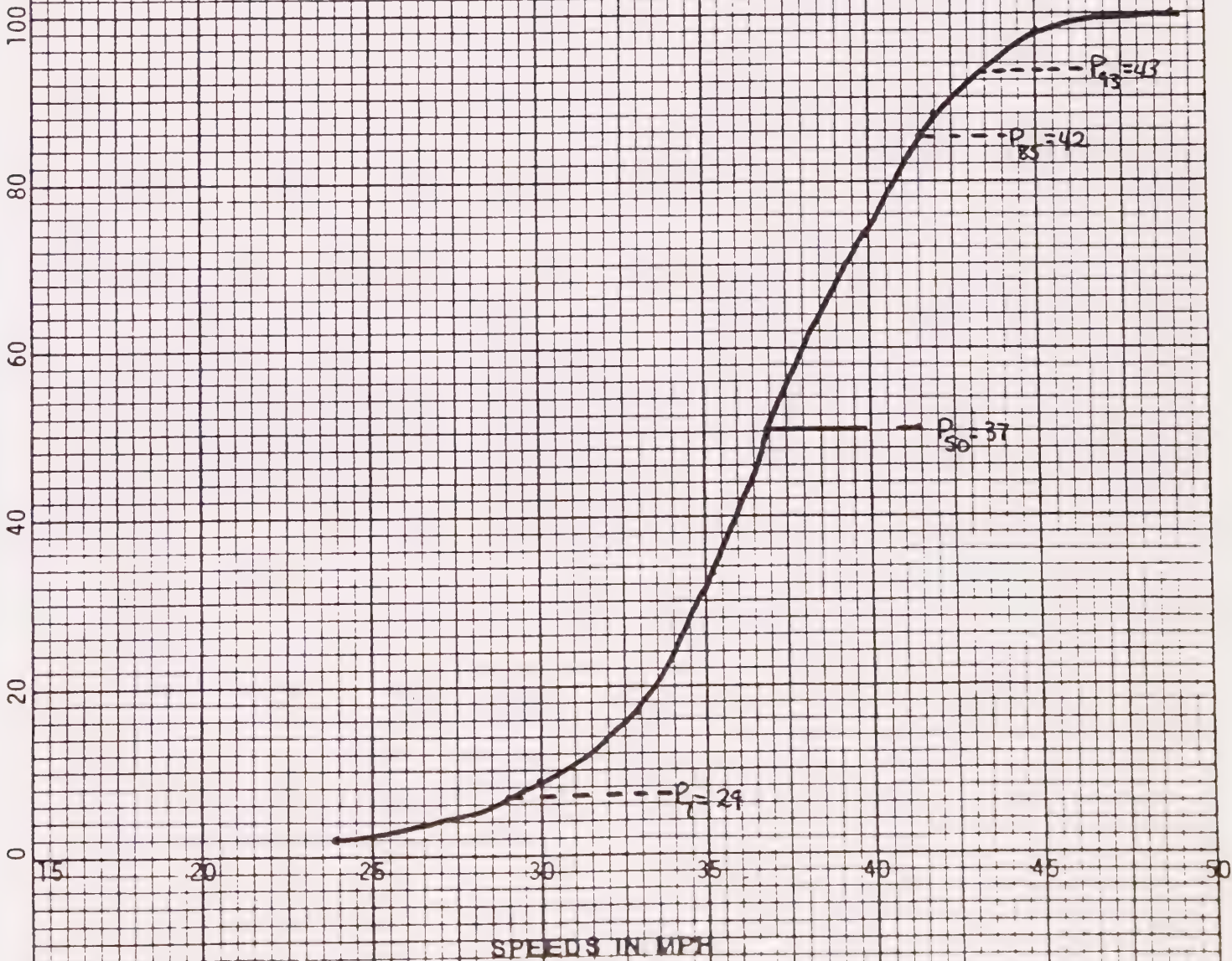
1. ACCIDENT RATE = SEE WESTBOUND
2. ADT = " "
3. DOWNGRADE

% OF TOTAL OBSERVATIONS



FREQUENCY CURVE

COMMULATIVE PERCENTAGE



CUMULATIVE FREQUENCY CURVE

BELMONT SPOT SPEED ANALYSIS

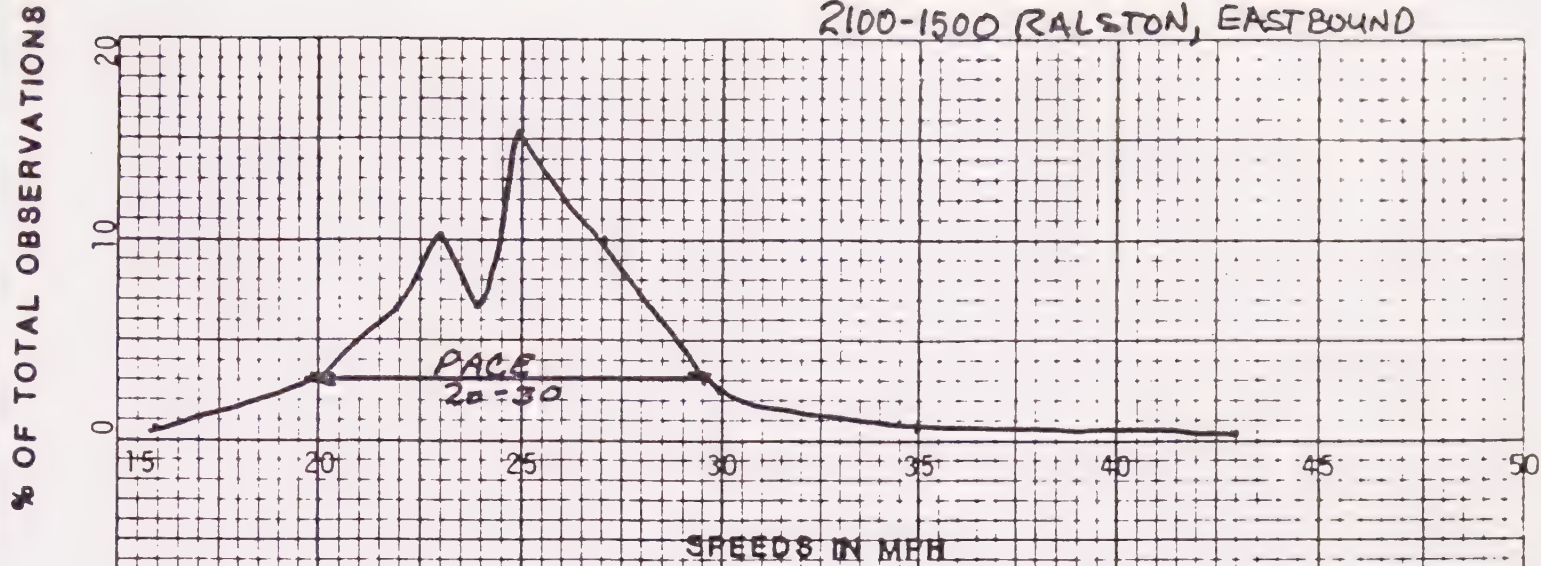
LOCATION 2100-1500 RALSTON, ALAMEDA to NOTRE DAME Ave
 DIRECTION EASTBOUND 50TH PERCENTILE SPEED 26
 DATE APRIL 23, 1982 85TH PERCENTILE SPEED 29
 DAY FRIDAY 10 MPH PACE SPEED 20-30
 TIME 1505-1530 PERCENT IN PACE SPEED 87.74
 POSTED SPEED LIMIT 25 RANGE OF SPEEDS 16-43
 STREET WIDTH 38 SKEWNESS INDEX 1.09
 OBSERVER J. Snodgrass / N. BRICHACEK ANALYSIS BY N. BRICHACEK

SPEED	0	5	10	15	20	25	30	35	40	TOTL NO	PER- CENT	ACCUM PERCENT
49												
48												
47												
46												
45												
44												
43	X									1	0.38	100.00
42	X									1	0.38	99.62
41												
40												
39												
38												
37												
36												
35	X	X								2	0.77	98.85
34	X	X	X							5	1.92	96.93
33	X	X	X							2	0.77	96.16
32	X	X	X	X						6	2.30	93.86
31	X	X	X	X						6	2.30	91.56
30	X	X	X	X	X					7	2.68	88.88
29	X	X	X	X	X	X				11	4.21	84.67
28	X	X	X	X	X	X	X			34	13.03	71.64
27	X	X	X	X	X	X	X	X		26	10.00	61.64
26	X	X	X	X	X	X	X	X		27	10.34	51.30
25	X	X	X	X	X	X	X	X	X	40	15.33	35.97
24	X	X	X	X	X	X	X	X		18	6.90	29.07
23	X	X	X	X	X	X	X	X		27	10.34	18.73
22	X	X	X	X	X	X	X	X		17	6.51	12.22
21	X	X	X	X	X	X	X	X		14	5.36	6.86
20	X	X	X	X	X	X	X	X		8	3.06	3.80
19	X	X	X	X	X	X	X	X		4	1.53	2.27
18	X	X	X	X	X	X	X	X		4	1.53	0.74
17												
16	X									1	0.38	0.36
15												

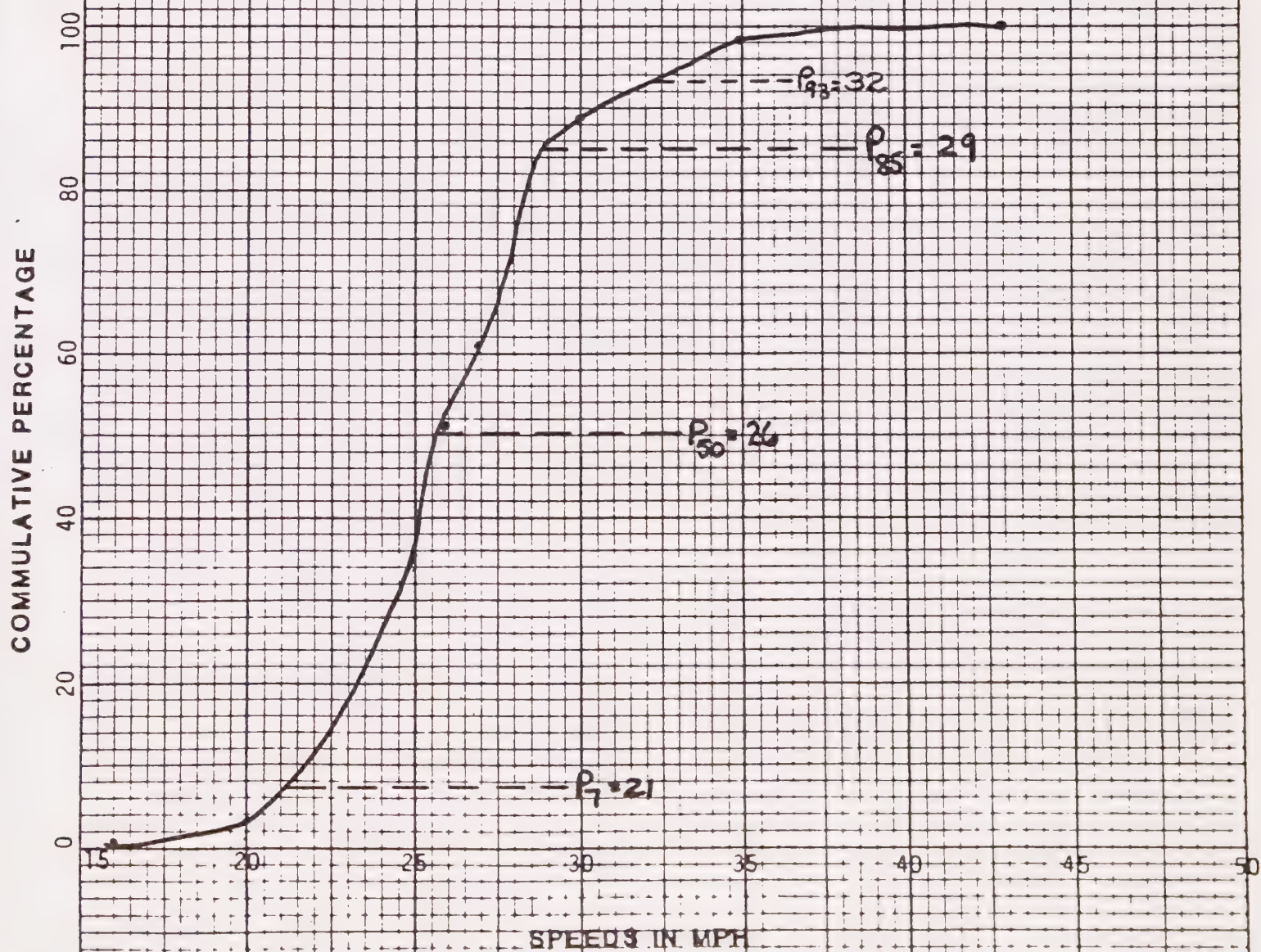
261

REMARKS

1. ACCIDENT RATE = SEE WESTBOUND
2. ADT = " "
3. BUSINESS-RESIDENTIAL WITH SCHOOL AT LEFT



FREQUENCY CURVE



CUMULATIVE FREQUENCY CURVE

BELMONT SPOT SPEED ANALYSIS

LOCATION 1500-1000 RALSTON, NOTRE DAME AVE to South Rd
 DIRECTION EASTBOUND 50TH PERCENTILE SPEED 31
 DATE APRIL 23, 1982 85TH PERCENTILE SPEED 35
 DAY FRIDAY 10 MPH PACE SPEED 26-36
 TIME 1535-1600 PERCENT IN PACE SPEED 94.84
 POSTED SPEED LIMIT 25 RANGE OF SPEEDS 24-42
 STREET WIDTH 38' SKEWNESS INDEX 1.11
 OBSERVER J. Snodgrass / N. Brichacek ANALYSIS BY N. Brichacek

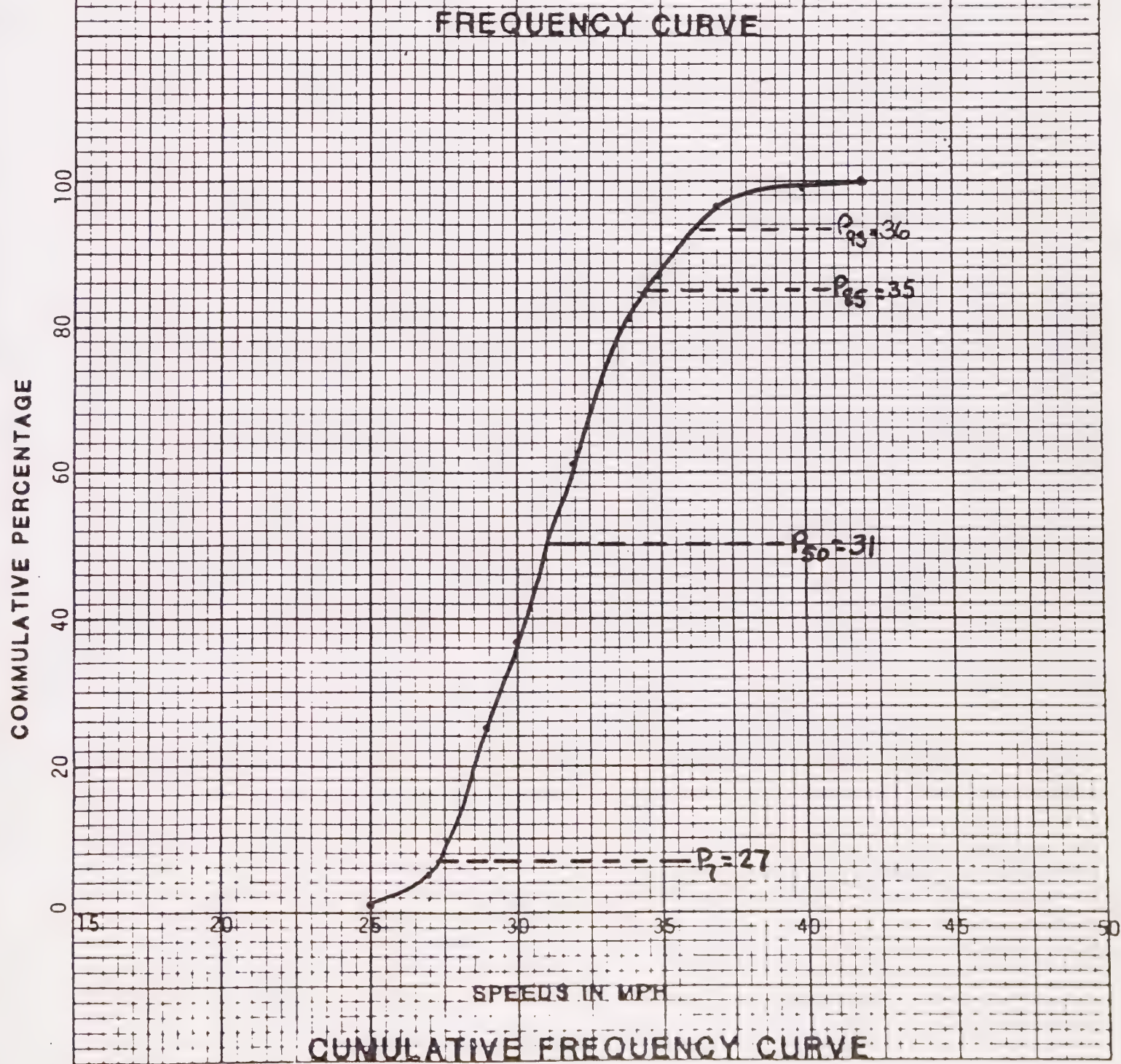
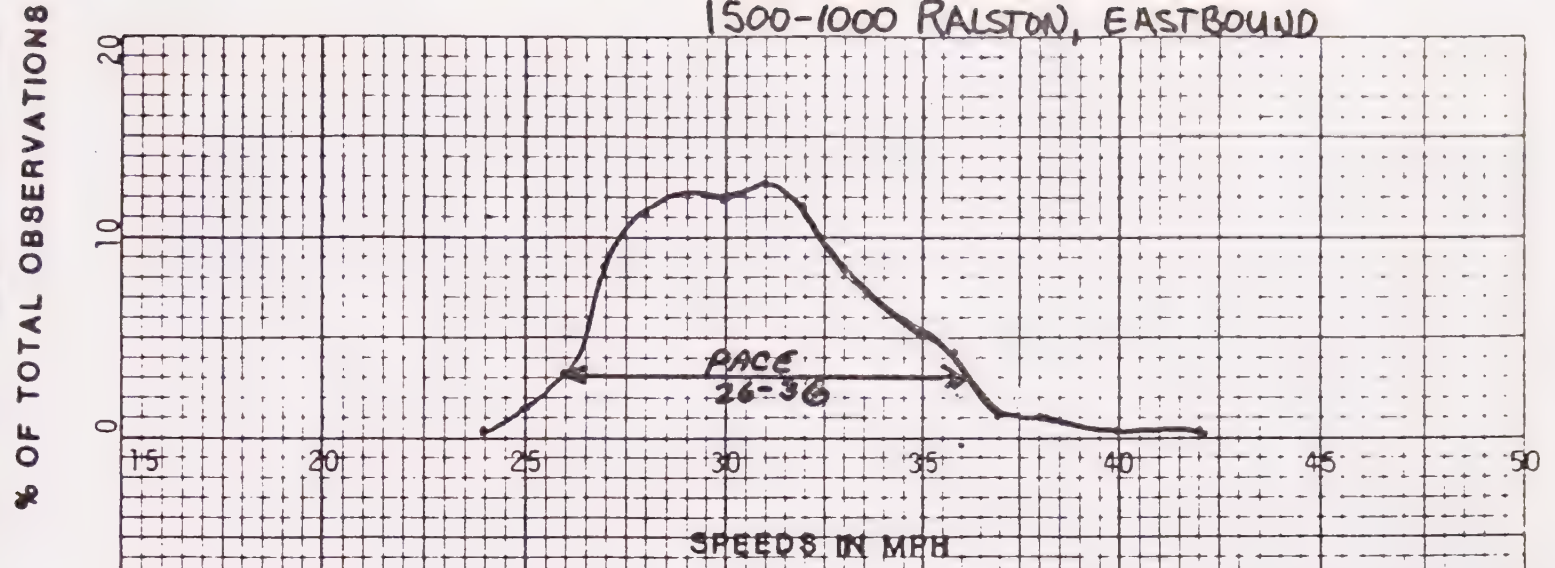
VEHICLE	NUMBER OF VEHICLES	TOTAL NO.	PERCENT	ACCUM PERCENT
49				
48				
47				
46				
45				
44				
43		1	0.34	100.00
42	X			
41		1	0.34	99.66
40	X	2	0.69	98.97
39	X	3	1.03	97.94
38	X	3	1.03	96.91
37	X	14	4.81	92.10
36	X	15	5.15	86.95
35	X	16	5.50	81.45
34	X	24	8.25	73.20
33	X	34	11.68	61.52
32	X	37	12.71	48.81
31	X	35	12.03	36.78
30	X	33	11.34	25.44
29	X	34	11.68	13.76
28	X	25	8.59	5.17
27	X	9	3.09	2.08
26	X	4	1.37	0.71
25	X	1	0.34	0.37
24	X			
23				
22				
21				
20				
19				
18				
17				
16				
15				

291

REMARKS

1. ACCIDENT RATE = SEE WESTBOUND
2. ADT = " "
3. CURVES TO THE LEFT-GOOD SIGHTS
4. RESIDENTIAL

1500-1000 RALSTON, EASTBOUND



BELMONT SPOT SPEED ANALYSIS

LOCATION 1000-500 RALSTON, SOUTH Rd to OLD COUNTY Rd

DIRECTION EASTBOUND

50TH PERCENTILE SPEED 28

DATE APRIL 23, 1982

85TH PERCENTILE SPEED 32

D A Y FRIDAY

10 MPH PACE SPEED 23-33

TIME 1005-1025

PERCENT IN PACE SPEED 82.20

POSTED SPEED LIMIT 25

RANGE OF SPEEDS 15-39

STREET WIDTH 40'

SKEWNESS INDEX 0.92

OBSERVER Snodgrass / N. BEICHACK

ANALYSIS BY N. BRICHACEK

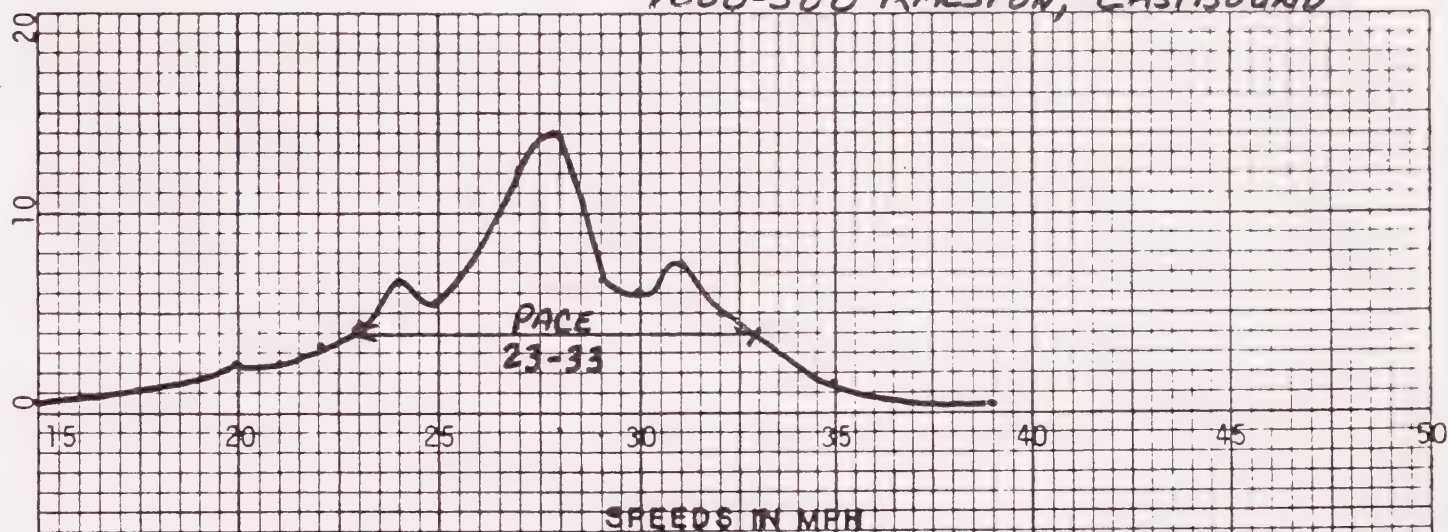
SPEED	NUMBER OF VEHICLES	TOTL NQ	PER CENT	ACCUM PERCENT
49				
48				
47				
46				
45				
44				
43				
42				
41				
40				
39	X	1	0.38	100.00
38				
37				
36	X X X X	4	1.52	98.48
35	X X X X	4	1.52	96.96
34	X X X X X X X X	8	3.03	93.93
33	X X X X X X X X X X	11	4.17	89.76
32	X X X X X X X X X X X X	17	6.44	83.32
31	X X X X X X X X X X X X X X	19	7.20	76.12
30	X X X X X X X X X X X X X X X X	16	6.06	70.06
29	X X X X X X X X X X X X X X X X X X	17	6.44	63.62
28	X X X X X X X X X X X X X X X X X X X X	38	14.39	49.23
27	X X	32	12.12	37.11
26	X X	21	7.95	29.66
25	X X	15	5.68	23.98
24	X X	18	6.82	17.16
23	X X	13	4.92	12.24
22	X X	9	3.41	8.83
21	X X	6	2.27	6.56
20	X X	7	2.65	3.91
19	X X	3	1.14	2.77
18	X X	2	0.76	2.01
17	X X	1	0.38	1.63
16	X X	2	0.76	0.87
15	X X			

REMARKS

1. ACCIDENT RATE = SEE WESTBOUND
2. ADT = " "
3. ENTRANCE TO TWIN PINES ON RIGHT
4. BUSINESS DISTRICT

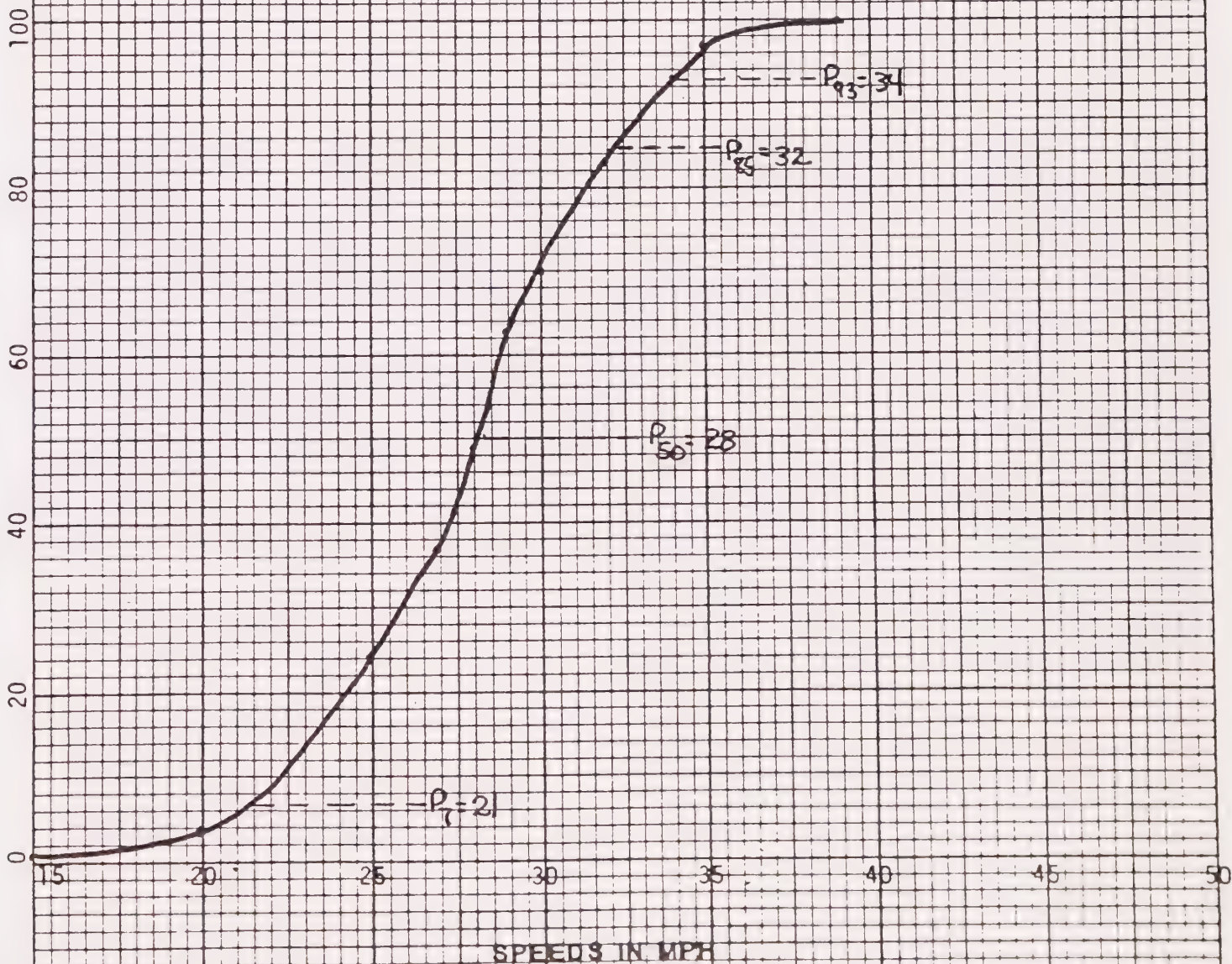
1000-500 RALSTON, EASTBOUND

% OF TOTAL OBSERVATIONS



FREQUENCY CURVE

COMMULATIVE PERCENTAGE



CUMULATIVE FREQUENCY CURVE

BELMONT SPOT SPEED ANALYSIS

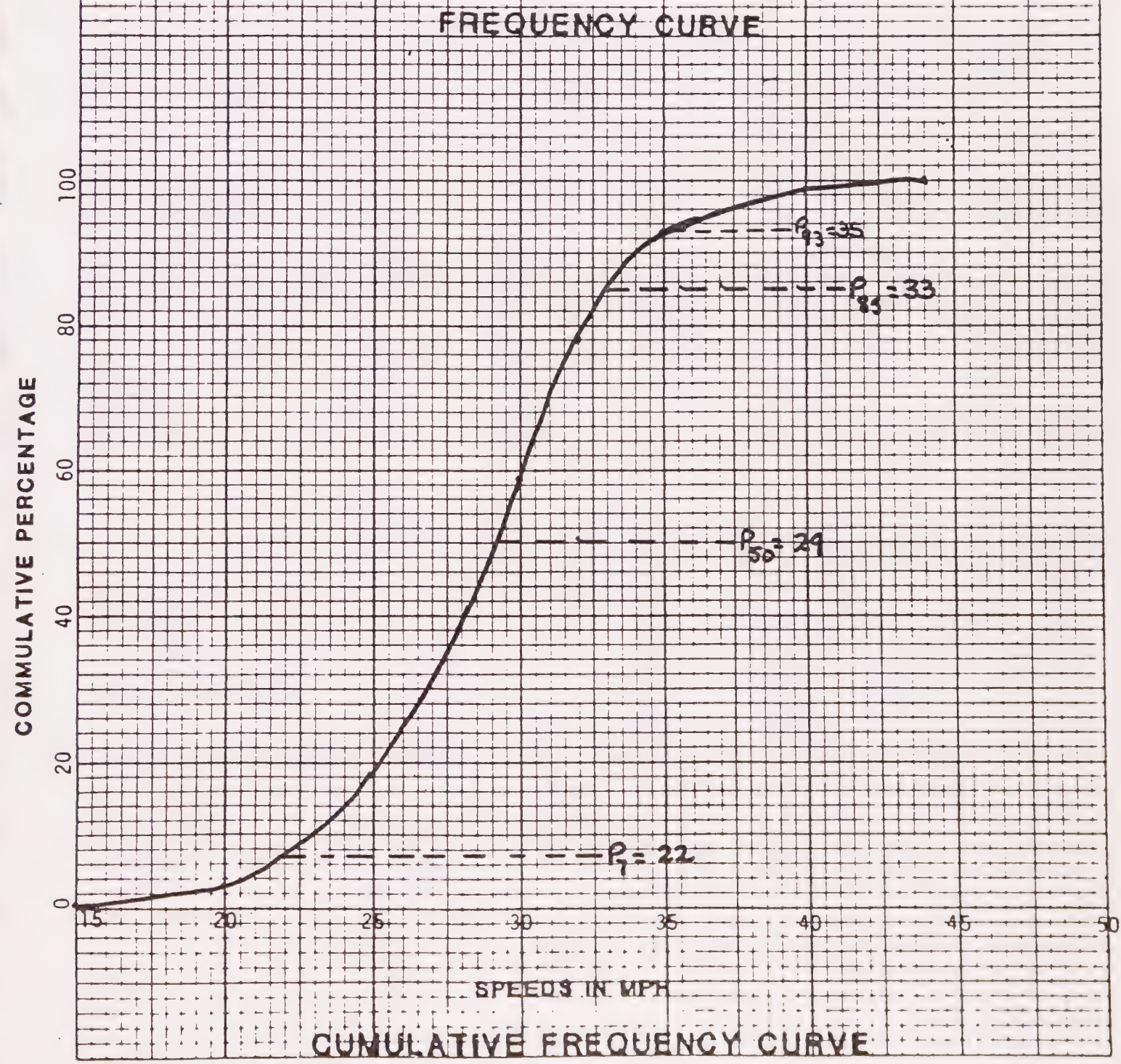
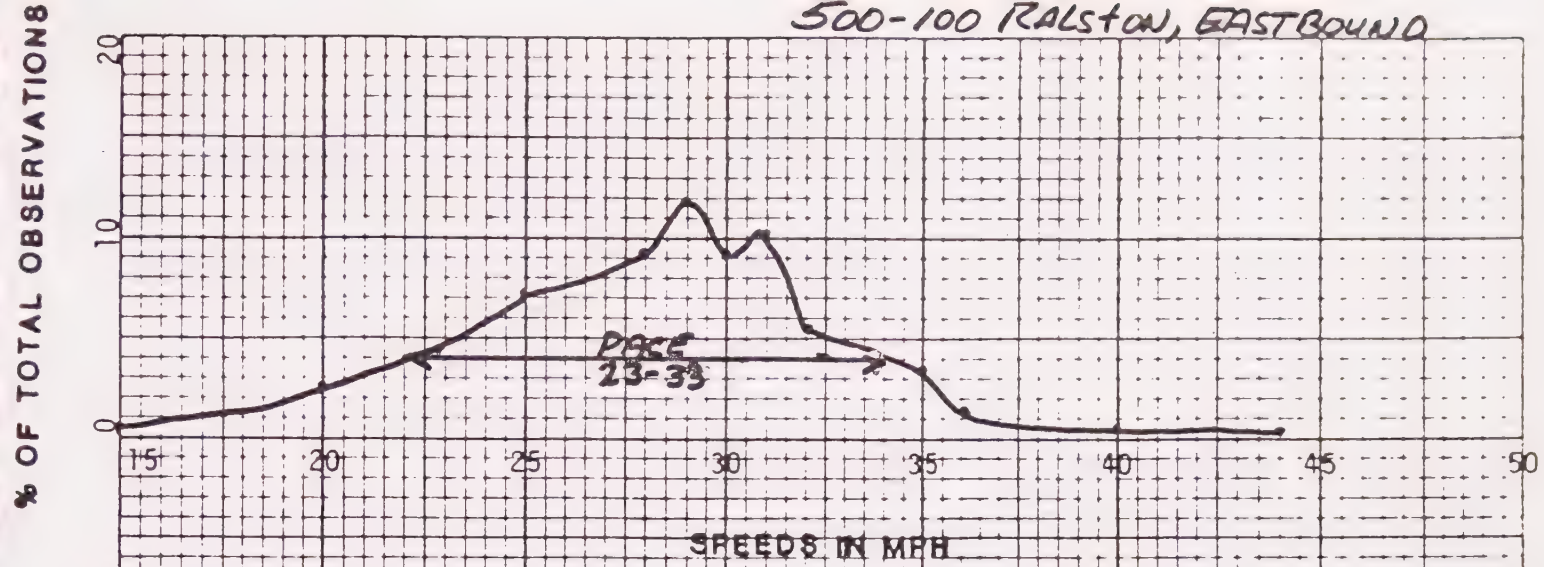
LOCATION 500-100 RALSTON, OLD COUNTY Rd to Hiller Str
 DIRECTION EASTBOUND 50TH PERCENTILE SPEED 29
 DATE MAY 3, 1982 85TH PERCENTILE SPEED 33
 DAY MONDAY 10 MPH PACE SPEED 23-33
 TIME 1230-1255 PERCENT IN PACE SPEED 79.40
 POSTED SPEED LIMIT 35 RANGE OF SPEEDS 15-44
 STREET WIDTH 45' SKEWNESS INDEX 0.92
 OBSERVER J. Snedgrass / N. BRICHACEK ANALYSIS BY N. BRICHACEK

SPEED	NUMBER OF VEHICLES																TOTAL NO.	PERCENT	ACCUM PERCENT
	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75			
49																			
48																			
47																			
46																			
45																			
44	X																1	0.30	100.00
43																			
42																			
41																			
40	XX																2	0.60	99.40
39																			
38	XX																2	0.60	98.80
37	XX																1	0.30	98.50
36	XX																4	1.19	97.31
35	XXXXXX																12	3.58	93.73
34	XXXXXX																15	4.48	89.25
33	XXXXXX																17	5.07	84.18
32	XXXXXX																18	5.37	78.18
31	XXXXXX																34	10.15	68.66
30	XXXXXX																31	9.25	59.41
29	XXXXXX																40	11.94	47.47
28	XXXXXX																31	9.25	38.22
27	XXXXXX																17	5.07	33.15
26	XXXXXX																26	7.76	28.39
25	XXXXXX																24	7.16	18.23
24	XXXXXX																14	4.18	14.05
23	XXXXXX																14	4.18	9.87
22	XXXXXX																6	1.79	8.08
21	XXXXXX																7	2.09	5.99
20	XXXXXX																8	2.39	3.60
19	XXXXXX																4	1.19	2.41
18	XX																2	0.60	1.81
17	XX																3	0.90	0.91
16	X																1	0.30	0.61
15	X																1	0.30	0.31

335

REMARKS

1. ACCIDENT RATE = SEE WESTBOUND
2. ADT = " "
3. BUSINESS-RESIDENTIAL AREA



BELMONT SPOT SPEED ANALYSIS

LOCATION RALSTON OVERPASS, HILLER ST to EAST CITY LIMITS
 DIRECTION BOTH 50TH PERCENTILE SPEED 40
 DATE APRIL 28, 1982 85TH PERCENTILE SPEED 45
 DAY WEDSENDAY 10 MPH PACE SPEED 35-45
 TIME 1545-1600 PERCENT IN PACE SPEED 63.64
 POSTED SPEED LIMIT 35 RANGE OF SPEEDS 25-49
 STREET WIDTH 48' SKEWNESS INDEX 0.67
 OBSERVER J. Snodgrass / N. BRICHACEK ANALYSIS BY N. BRICHACEK

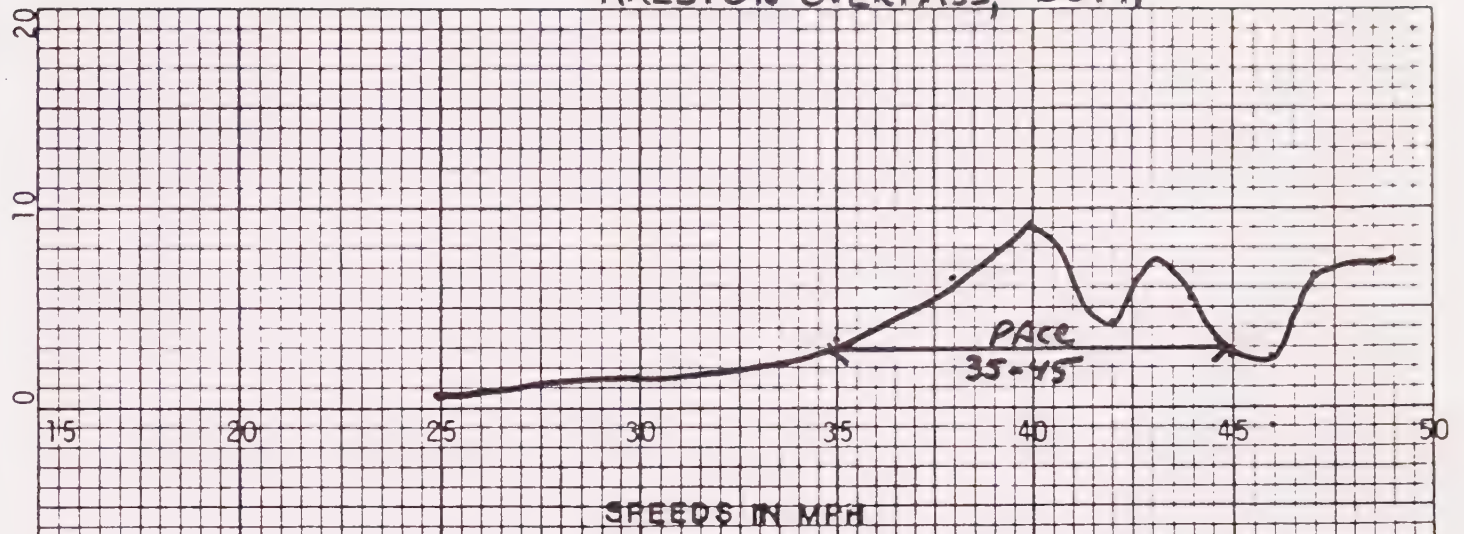
SPEED	0	5	10	15	20	25	30	35	40	TOTL NQ	PER CENT	ACCUM PERCENT
49	X	X	X	X	X	X	X	X	X	9	7.44	100.00
48	X	X	X	X	X	X	X	X	X	1	0.83	99.17
47	X	X	X	X	X	X	X	X	X	8	6.61	92.56
46	X	X	X	X	X	X	X	X	X	3	2.48	90.08
45	X	X	X	X	X	X	X	X	X	3	2.48	87.60
44	X	X	X	X	X	X	X	X	X	7	5.79	81.81
43	X	X	X	X	X	X	X	X	X	9	7.44	74.37
42	X	X	X	X	X	X	X	X	X	5	4.13	70.24
41	X	X	X	X	X	X	X	X	X	11	9.09	61.15
40	X	X	X	X	X	X	X	X	X	11	9.09	52.06
39	X	X	X	X	X	X	X	X	X	7	5.79	46.27
38	X	X	X	X	X	X	X	X	X	8	6.61	39.66
37	X	X	X	X	X	X	X	X	X	5	4.13	35.53
36	X	X	X	X	X	X	X	X	X	7	5.79	29.74
35	X	X	X	X	X	X	X	X	X	4	3.31	26.43
34	X	X	X	X	X	X	X	X	X	3	2.48	23.95
33	X	X	X	X	X	X	X	X	X	4	3.31	20.64
32	X	X	X	X	X	X	X	X	X	4	3.31	17.33
31	X	X	X	X	X	X	X	X	X	5	4.13	13.20
30	X	X	X	X	X	X	X	X	X	2	1.65	11.55
29	X	X	X	X	X	X	X	X	X	2	1.65	9.90
28	X	X	X	X	X	X	X	X	X	2	1.65	8.25
27	X	X	X	X	X	X	X	X	X	2	1.65	6.60
26	X	X	X	X	X	X	X	X	X	1	0.83	5.77
25	X	X	X	X	X	X	X	X	X	1	0.83	4.94
24	X	X	X	X	X	X	X	X	X			
23	X	X	X	X	X	X	X	X	X			
22	X	X	X	X	X	X	X	X	X			
21	X	X	X	X	X	X	X	X	X			
20	X	X	X	X	X	X	X	X	X			
19	X	X	X	X	X	X	X	X	X			
18	X	X	X	X	X	X	X	X	X			
17	X	X	X	X	X	X	X	X	X			
16	X	X	X	X	X	X	X	X	X			
15	X	X	X	X	X	X	X	X	X			

REMARKS

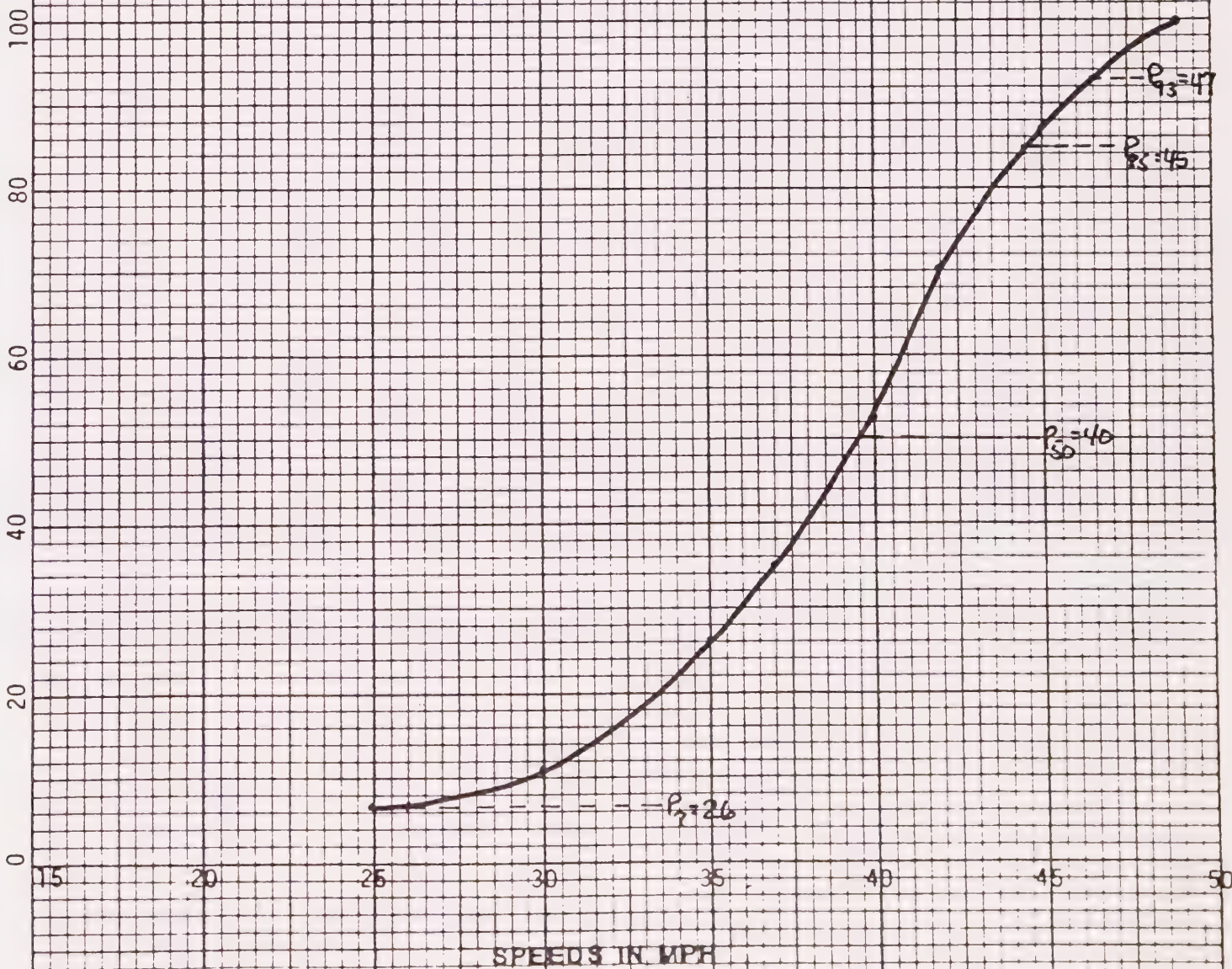
1. STATE MAINTAINED
2. ACCIDENT RATE = 1.75/YR
3. ADT = 21,100

RALSTON OVERPASS, BOTH

% OF TOTAL OBSERVATIONS



COMMUTATIVE PERCENTAGE



BELMONT SPOT SPEED ANALYSIS

LOCATION 300-700 MIDDLE ROAD

DIRECTION BOTH

DATE April 23, 1982

DAY FRIDAY

TIME 1025-1055

POSTED SPEED LIMIT 25

STREET WIDTH 24'

OBSERVER J. Snodgrass / N. BRICHACEK

50TH PERCENTILE SPEED 23

85TH PERCENTILE SPEED 29

10 MPH PACE SPEED 17-27

PERCENT IN PACE SPEED 74.16

RANGE OF SPEEDS 15-37

SKEWNESS INDEX 1.20

ANALYSIS BY N. BRICHACEK

SPEED	NUMBER OF VEHICLES										TOTAL NO.	PERCENT	ACCUM PERCENT
	0	5	10	15	20	25	30	35	40	45			
49													
48													
47													
46													
45													
44													
43													
42													
41													
40													
39													
38											1	1.12	100.00
37	X												
36													
35											1	1.12	98.88
34	X										1	1.12	97.76
33	X										3	3.37	94.39
32	X	X									4	4.49	89.90
31	X	X	X								1	1.12	88.78
30	X										4	4.49	84.29
29	X	X	X								2	2.25	82.04
28	X	X									4	4.49	77.55
27	X	X	X								4	4.49	73.06
26	X	X	X								4	4.49	68.57
25	X	X	X								3	3.37	65.20
24	X	X									9	10.11	55.09
23	X	X	X	X	X						12	13.48	41.61
22	X	X	X	X	X	X					4	4.49	37.12
21	X	X	X								7	7.87	29.25
20	X	X	X	X	X						11	12.36	16.89
19	X	X	X	X	X						5	5.62	11.27
18	X	X	X								3	3.37	7.90
17	X	X									2	2.25	5.65
16	X										4	4.49	1.16
15	X	X	X										

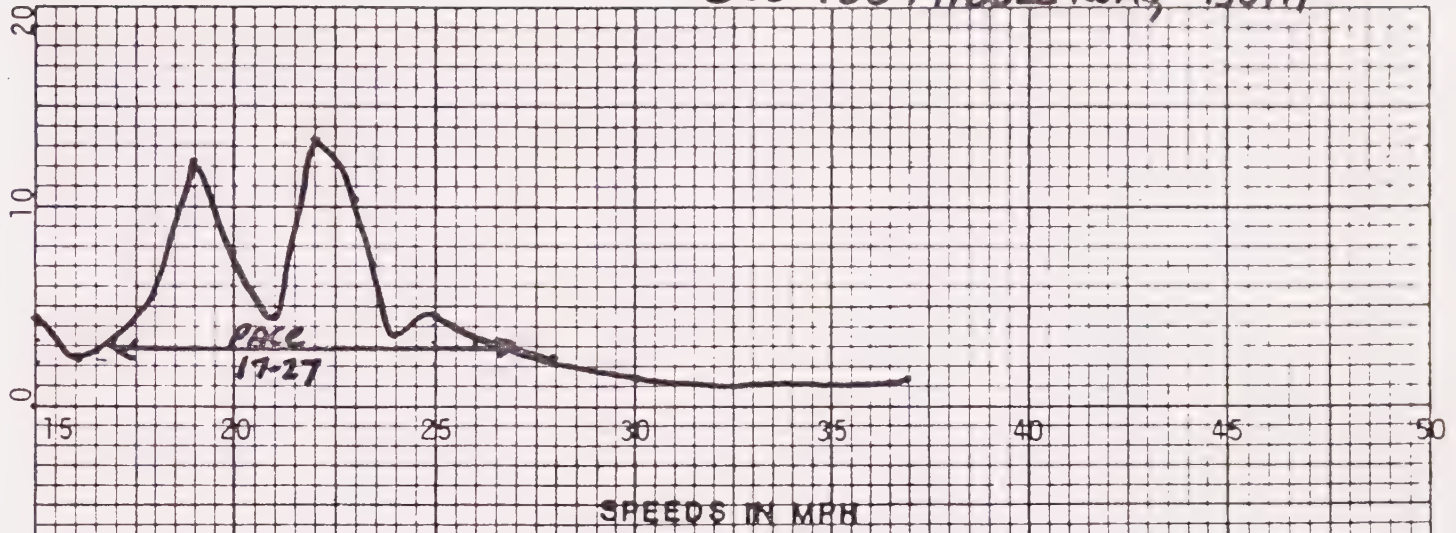
89

REMARKS

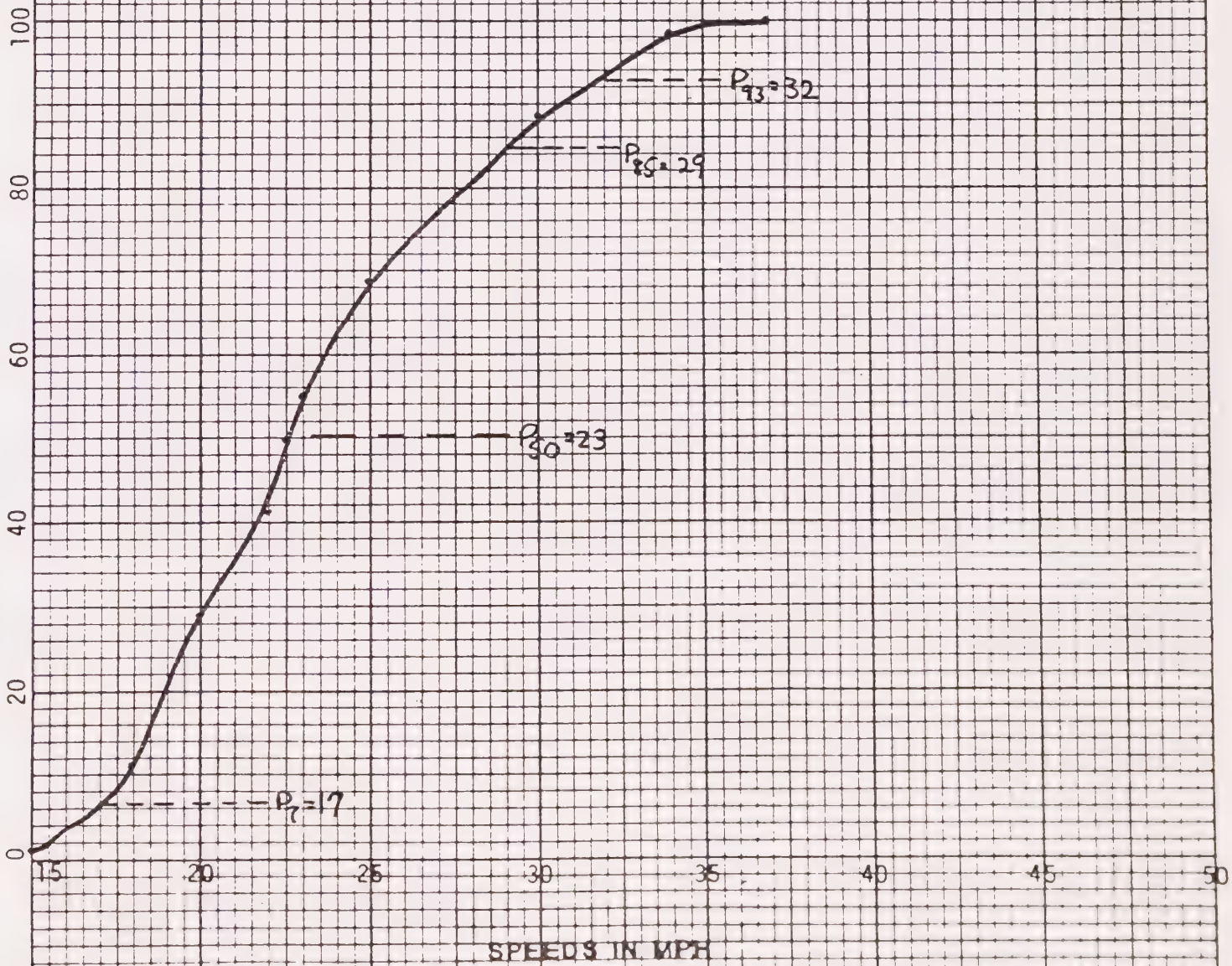
1. ACCIDENT RATE - 17.53 MVM
2. ADT = 2,000
3. WINDING ROAD WITH LIMITED SIGHT DISTANCES
4. RESIDENTIAL

300-700 MIDDLE ROAD, BOTH

% OF TOTAL OBSERVATIONS



COMMUTATIVE PERCENTAGE



BELMONT SPOT SPEED ANALYSIS

LOCATION OLD COUNTY Rd (NORTH of RALSTON AVE)
 DIRECTION BOTH
 DATE APRIL 23, 1982
 DAY FRIDAY
 TIME 1055-1120
 POSTED SPEED LIMIT 25
 STREET WIDTH 30'
 OBSERVER J. Snodgrass / N. BRICHACEK
 50TH PERCENTILE SPEED 28
 85TH PERCENTILE SPEED 31
 10 MPH PACE SPEED 22-32
 PERCENT IN PACE SPEED 82.95
 RANGE OF SPEEDS 15-40
 SKEWNESS INDEX 0.83
 ANALYSIS BY N. BRICHACEK

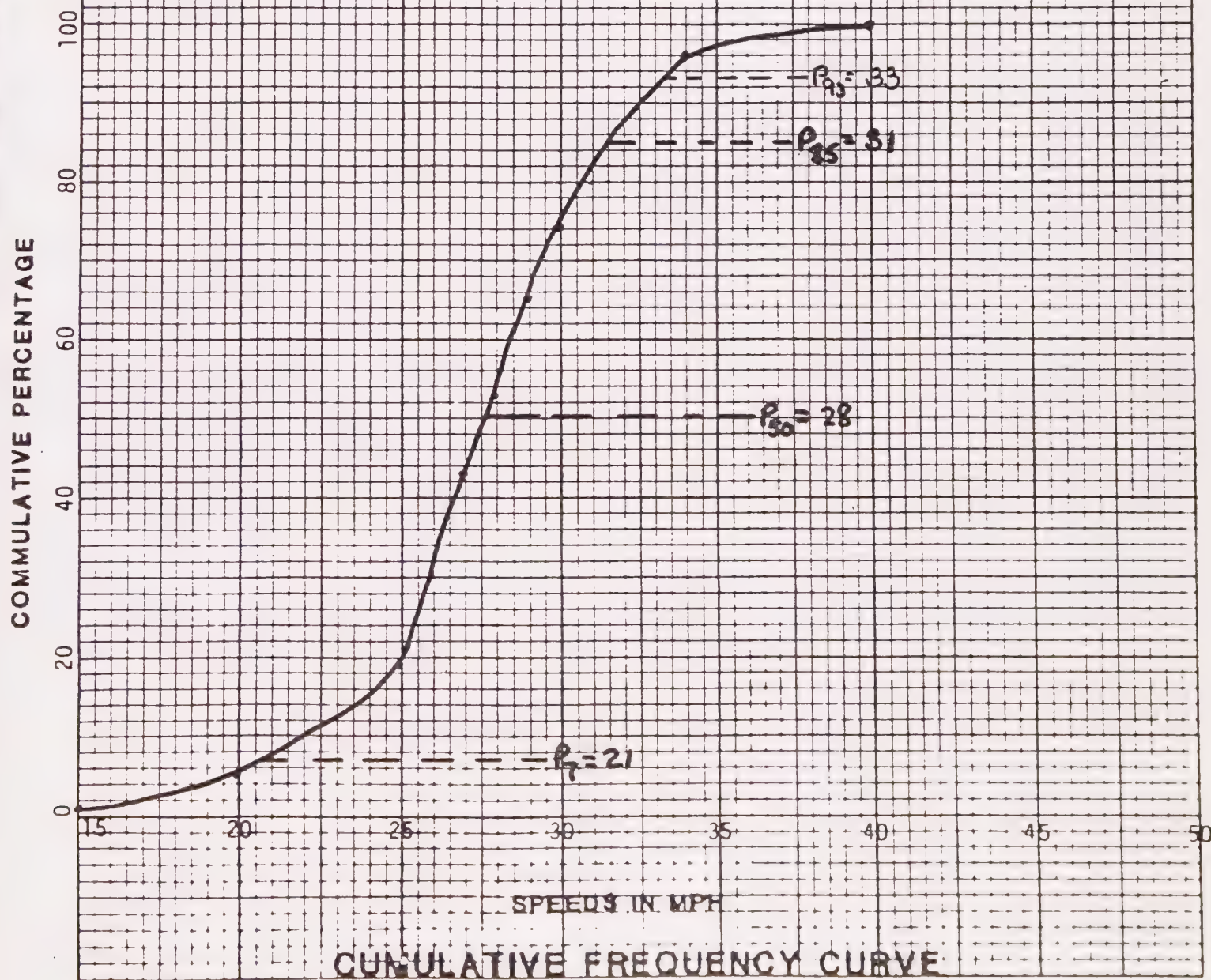
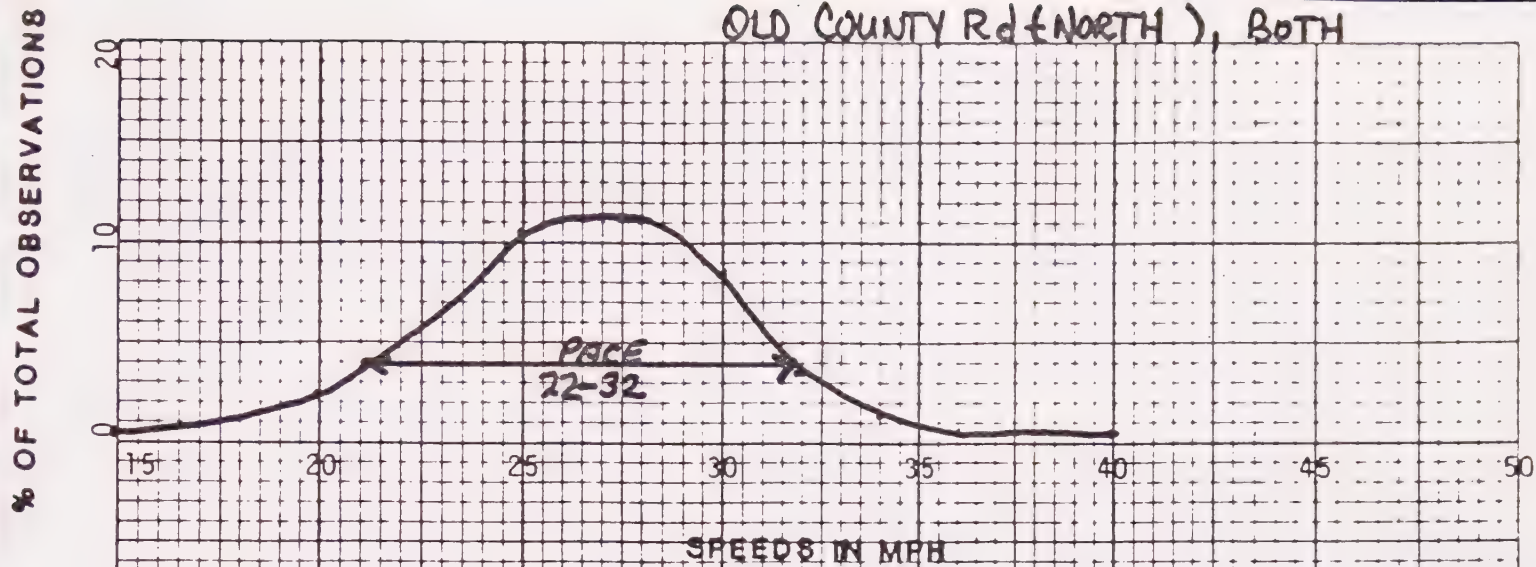
SPEED	0	5	10	15	20	25	30	35	40	TOTL NO	PER- CENT	ACCUM PERCENT
49												
48												
47												
46												
45												
44												
43												
42												
41										1	0.57	100.00
40	X									1	0.57	99.43
39	X									1	0.57	98.86
38	X									1	0.57	98.29
37	X									2	1.14	97.15
36	X											
35										2	1.14	96.01
34	X									8	4.53	91.46
33	X	X								6	3.41	88.05
32	X	X	X							9	5.11	82.94
31	X	X	X	X						15	8.52	74.42
30	X	X	X	X	X					16	9.09	65.33
29	X	X	X	X	X	X				20	11.36	53.97
28	X	X	X	X	X	X	X			19	10.79	43.18
27	X	X	X	X	X	X	X	X		23	13.07	30.11
26	X	X	X	X	X	X	X	X	X	19	10.79	19.32
25	X	X	X	X	X	X	X	X	X	10	5.68	14.24
24	X	X	X	X	X	X	X	X	X	7	3.48	10.26
23	X	X	X	X	X	X	X	X	X	2	1.14	9.12
22	X	X	X	X	X	X	X	X	X	2	1.14	7.98
21	X	X	X	X	X	X	X	X	X	4	2.27	5.71
20	X	X	X	X	X	X	X	X	X	2	1.14	4.57
19	X	X	X	X	X	X	X	X	X			
18	X	X	X	X	X	X	X	X	X	3	1.70	2.87
17	X	X	X	X	X	X	X	X	X	2	1.14	1.73
16	X	X	X	X	X	X	X	X	X	1	0.57	1.16
15	X	X	X	X	X	X	X	X	X			

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REMARKS

1. ACCIDENT RATE = 11.27 MVM
2. ADT = 8,400
3. BUSINESSES ON WEST SIDE
4. RESIDENTIAL ON EAST SIDE

OLD COUNTY Rd (NORTH), BOTH



BELMONT SPOT SPEED ANALYSIS

LOCATION OLD COUNTY Rd (SOUTH OF RALSTON)
 DIRECTION BOTH 50TH PERCENTILE SPEED 26
 DATE APRIL 23, 1982 85TH PERCENTILE SPEED 30
 DAY FRIDAY 10 MPH PACE SPEED 19-29
 TIME 1125-1150 PERCENT IN PACE SPEED 75.14
 POSTED SPEED LIMIT 25 RANGE OF SPEEDS 15-45
 STREET WIDTH 30' SKEWNESS INDEX 0.93
 OBSERVER J. Snodgrass / N. Brachacek ANALYSIS BY N. BRACHACEK

PEED	NUMBER OF VEHICLES	TOTL	PER	ACCUM
	0 5 10 15 20 25 30 35 40	NQ	CENT	PERCENT
49				
48				
47				
46				
45	X	1	0.54	100.00
44				
43				
42				
41				
40		2	1.08	98.92
39	XX	1	0.54	98.38
38	X	1	0.54	97.84
37	X	1	0.54	97.30
36	X	3	1.62	95.68
35	XXX			
34		5	2.70	92.98
33	XXXXXX	4	2.16	90.82
32	XXXXX	8	4.32	86.50
31	XXXXXXXXXX	4	2.16	84.34
30	XXXX	16	8.65	75.69
29	XXXXXXXXXXXXXXXXXXXX	14	7.57	68.12
28	XXXXXXXXXXXXXXXXXXXX	11	5.95	62.17
27	XXXXXXXXXXXXXXXXXXXX	21	11.35	50.82
26	XXXXXXXXXXXXXXXXXXXX	8	4.32	46.50
25	XXXXXXXXXX	16	8.65	37.85
24	XXXXXXXXXXXXXXXXXXXX	15	8.11	29.74
23	XXXXXXXXXXXXXXXXXXXX	7	3.78	25.96
22	XXXXXXXXXX	11	5.95	20.01
21	XXXXXXXXXXXX	10	5.41	14.60
20	XXXXXXXXXXXX	10	5.41	9.19
19	XXXXXXXXXX	5	2.70	6.49
18	XXXXXX	4	2.16	4.33
17	XXXX	6	3.24	1.09
16	XXXX	1	0.54	0.55
15	X			

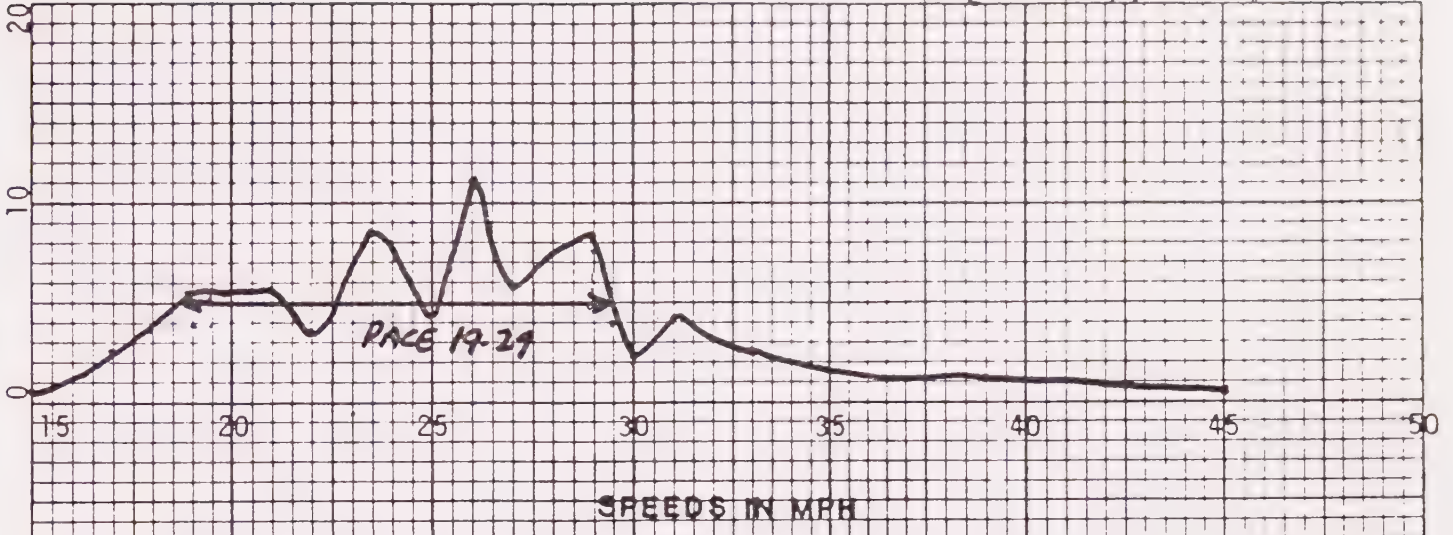
185

REMARKS

1. ACCIDENT RATE = 11.13 MVM
2. ADT = 6,000
3. RESIDENTIAL AND BUSINESS

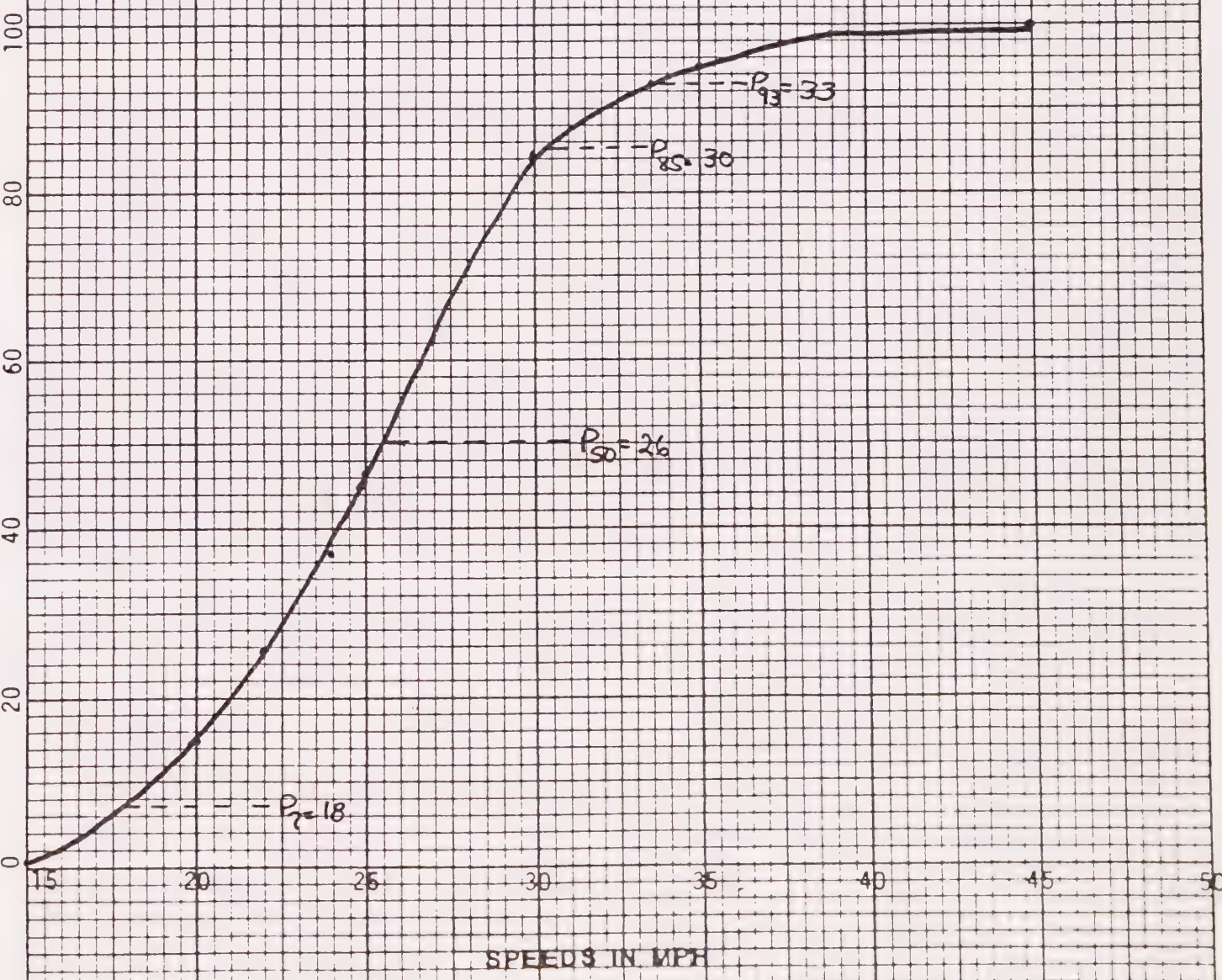
OLD COUNTY RD (SOUTH) + BOTH

% OF TOTAL OBSERVATIONS



FREQUENCY CURVE

COMMULATIVE PERCENTAGE



CUMULATIVE FREQUENCY CURVE

BELMONT SPOT SPEED ANALYSIS

LOCATION ALAMEDA DE LAS PULGAS (NORTH OF RALSTON)
 DIRECTION BOTH 50TH PERCENTILE SPEED 23
 DATE APRIL 23, 1982 85TH PERCENTILE SPEED 25
 DAY FRIDAY 10 MPH PACE SPEED 17.5-27.5
 TIME 1200-1225 PERCENT IN PACE SPEED 98.00
 POSTED SPEED LIMIT 25 RANGE OF SPEEDS 17-32
 STREET WIDTH 20' SKEWNESS INDEX 1.00
 OBSERVER J. SNOODGRASS / N. BRICHACEK ANALYSIS BY N. BRICHACEK

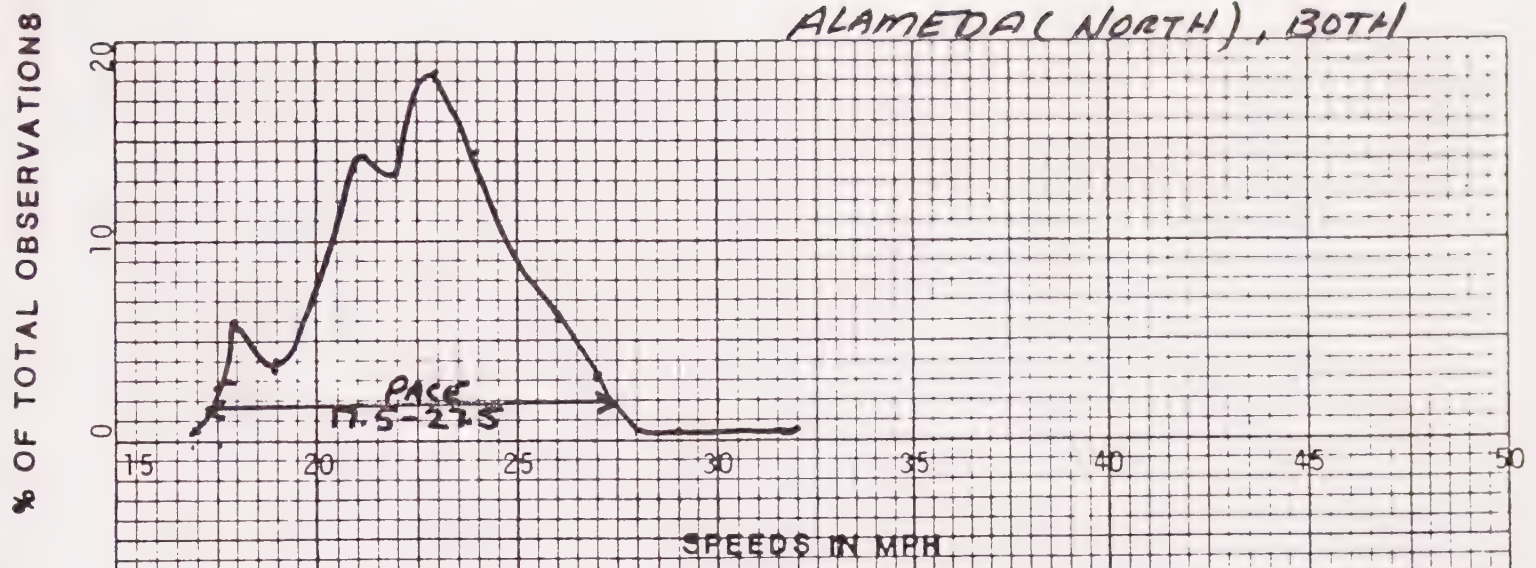
VEHICLE SPEED	NUMBER OF VEHICLES	TOTAL NO.	PERCENT	ACCUM. PERCENT
49				
48				
47				
46				
45				
44				
43				
42				
41				
40				
39				
38				
37				
36				
35				
34				
33		1	0.67	100.00
32	X			
31				
30		1	0.67	99.33
29	X	1	0.67	98.66
28	X	5	3.33	95.33
27	X X X X	9	6.00	89.33
26	X X X X X X X X	14	9.33	80.00
25	X X X X X X X X X X X X X X	22	14.67	65.33
24	X X X X X X X X X X X X X X X X X X	28	18.67	46.66
23	X X X X X X X X X X X X X X X X X X	20	13.33	33.33
22	X X X X X X X X X X X X X X X X X X	21	14.00	19.33
21	X X X X X X X X X X X X X X X X X X	11	7.33	12.00
20	X X X X X X X X X X X X X X X X X X	6	4.00	8.00
19	X X X X X X X X X X X X X X X X X X	9	6.00	2.00
18	X X X X X X X X X X X X X X X X X X	2	1.33	0.67
17	X X			
16				
15				

150

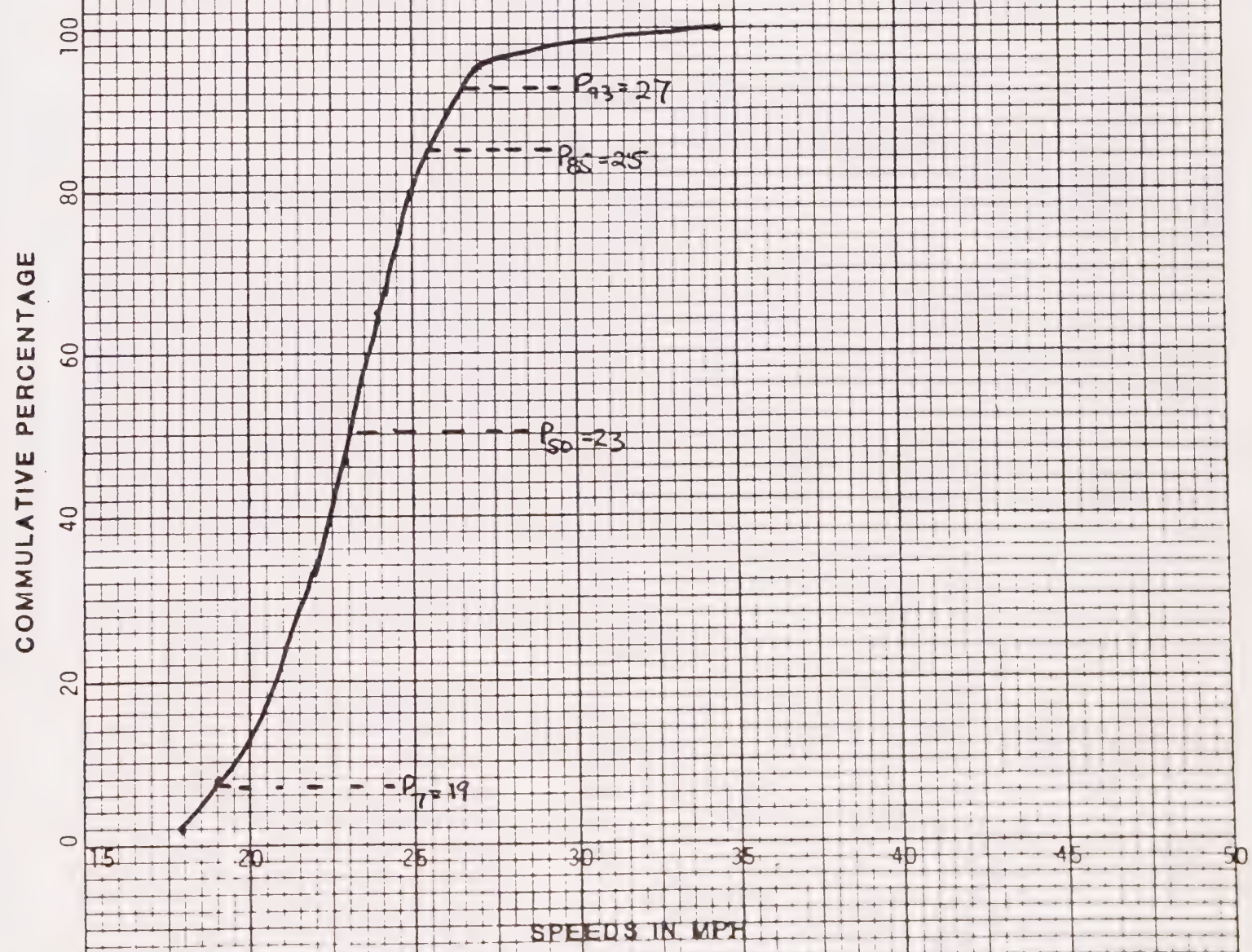
REMARKS

1. ACCIDENT RATE = 5.42 MVM
2. ADT = 8,400
3. WINDING NARROW ROAD WITH STOP SIGNS, LIMITED SIGHT DISTANCES
4. RESIDENTIAL

ALAMEDA (NORTH), BOTH



FREQUENCY CURVE



CUMULATIVE FREQUENCY CURVE

BELMONT SPOT SPEED ANALYSIS

LOCATION ALAMEDA DE LAS PULGAS (SOUTH of RALSTON)
 DIRECTION BOTH 50TH PERCENTILE SPEED 28
 DATE APRIL 23, 1982 85TH PERCENTILE SPEED 33
 DAY FRIDAY 10 MPH PACE SPEED 24-34
 TIME 1225-1250 PERCENT IN PACE SPEED 83.88
 POSTED SPEED LIMIT 25 RANGE OF SPEEDS 15-42
 STREET WIDTH 40' SKEWNESS INDEX 1.08
 OBSERVER J. SNODGRASS / N. BRICHACEK ANALYSIS BY N. BRICHACEK

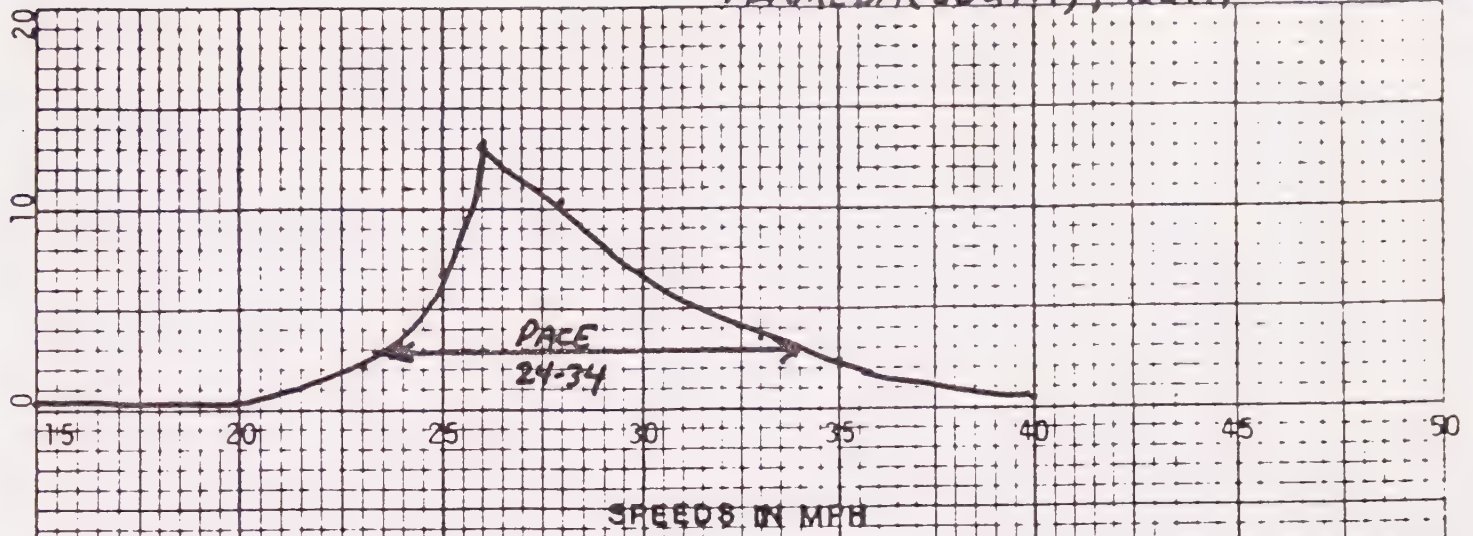
NUMBER OF VEHICLES										TOTAL	PER	ACCUM
EED	0	5	10	15	20	25	30	35	40	NO	CENT	PERCENT
9												
48												
47												
46												
45												
44												
43										1	0.33	100.00
42	X									1	0.33	99.67
41												
40	X											
39										2	0.66	99.01
38	X	X								3	0.99	98.02
37	X	X	X							3	0.99	97.03
36	X	X	X							7	2.30	94.73
35	X	X	X	X						7	2.30	92.43
34	X	X	X	X	X					15	4.93	87.50
33	X	X	X	X	X	X				16	5.26	82.24
32	X	X	X	X	X	X	X			29	9.54	72.70
31	X	X	X	X	X	X	X	X		21	6.91	65.79
30	X	X	X	X	X	X	X	X		20	6.58	59.21
29	X	X	X	X	X	X	X	X		32	10.53	48.6
28	X	X	X	X	X	X	X	X		30	9.87	38.81
27	X	X	X	X	X	X	X	X	X	40	13.16	25.65
26	X	X	X	X	X	X	X	X	X	21	6.91	18.74
25	X	X	X	X	X	X	X	X	X	24	7.89	10.85
24	X	X	X	X	X	X	X	X	X	10	3.29	7.56
23	X	X	X	X	X	X	X	X	X	8	2.63	4.93
22	X	X	X	X	X	X	X	X	X	7	2.30	2.63
21	X	X	X	X	X	X	X	X	X	1	0.33	2.30
20	X									2	0.66	1.64
19	X	X								1	0.33	1.31
18	X									2	0.66	0.65
17	X	X										
16												
15	X									1	0.33	0.32

304

REMARKS

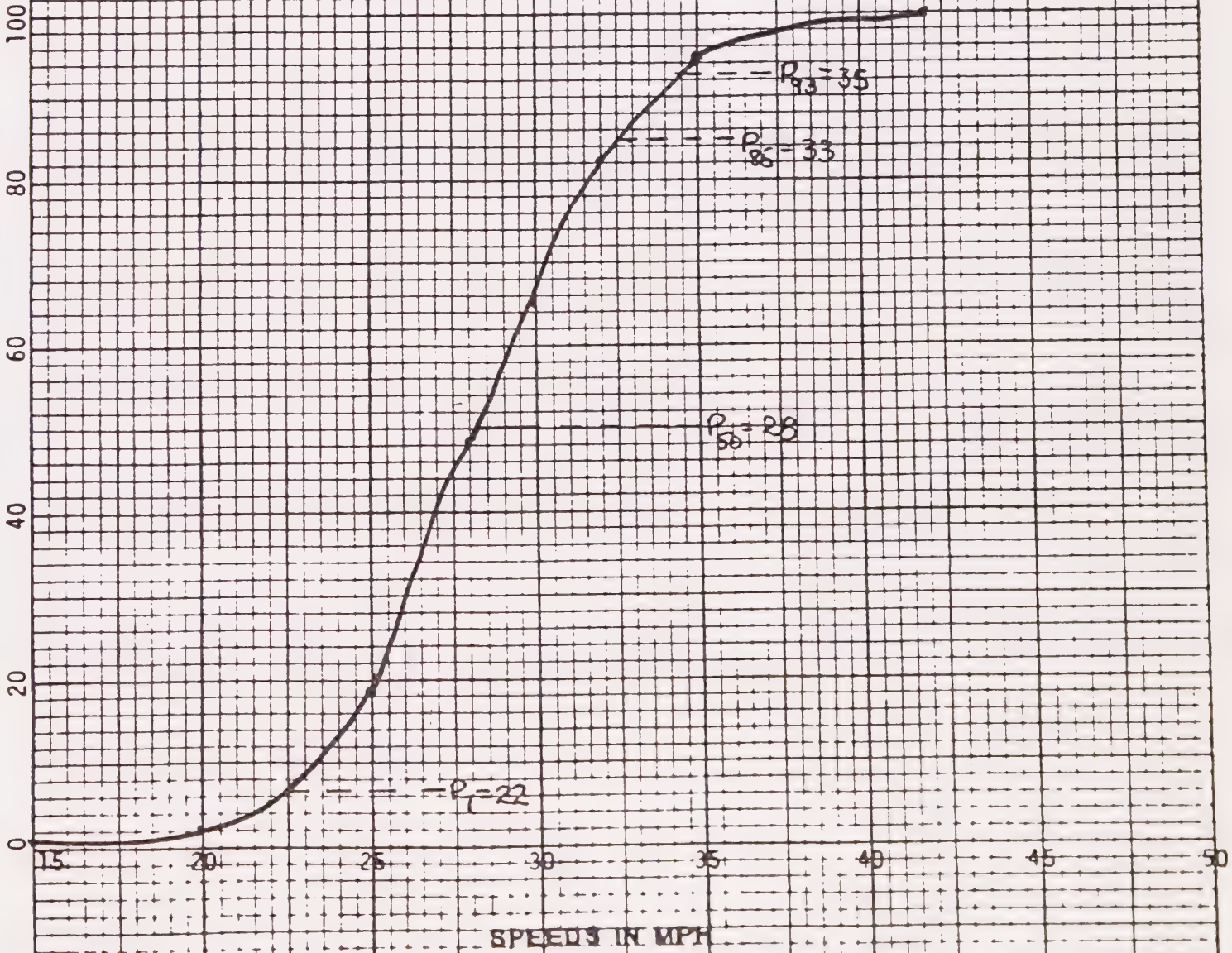
1. ACCIDENT RATE = 7.56 MVM
2. ADT = 16,600
3. BUSINESS & RESIDENTIAL

% OF TOTAL OBSERVATIONS



FREQUENCY CURVE

COMMUTATIVE PERCENTAGE



CUMULATIVE FREQUENCY CURVE

BELMONT SPOT SPEED ANALYSIS

LOCATION 2400-2800 HALLMARK

DIRECTION BOTH

DATE APRIL 28, 1982

DAY WEDNESDAY

TIME 0930-0950

POSTED SPEED LIMIT 25

STREET WIDTH 37'

OBSERVER J. SNODGRAN / N. BRKHACEK

50TH PERCENTILE SPEED 26

85TH PERCENTILE SPEED 32

10 MPH PACE SPEED 22-32

PERCENT IN PACE SPEED 62.79

RANGE OF SPEEDS 15-41

SKEWNESS INDEX 0.94

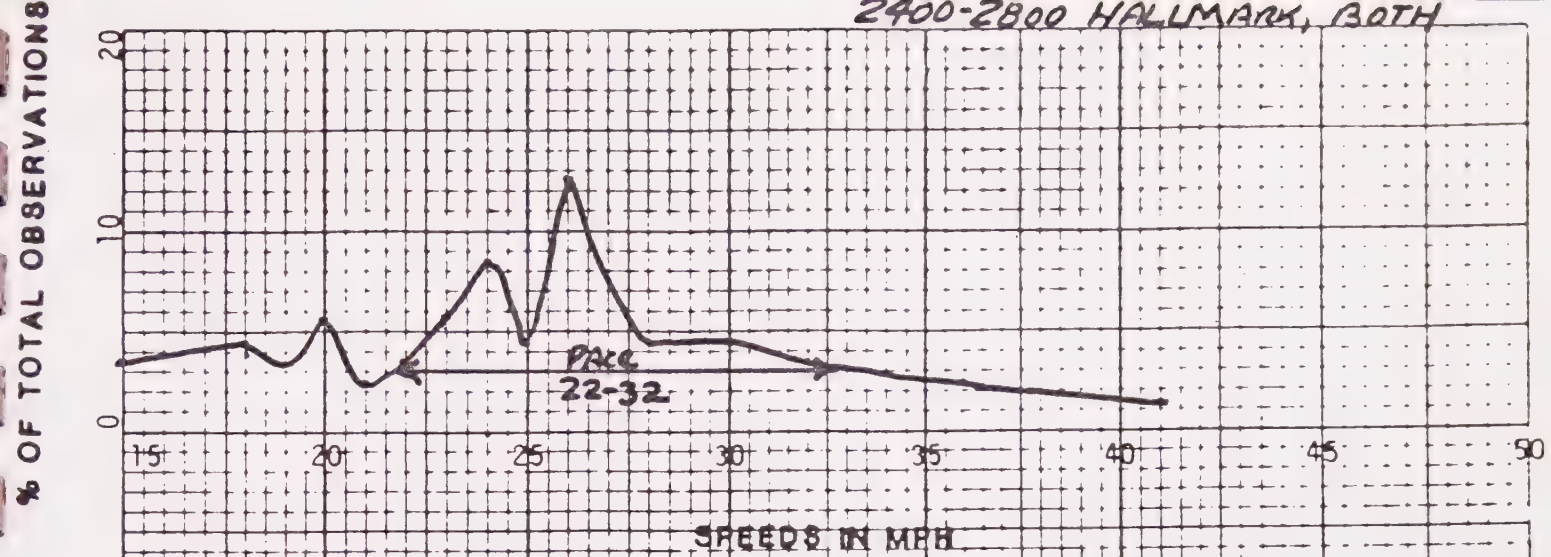
ANALYSIS BY N. BRKHACEK

VEHICLE	0	5	10	15	20	25	30	35	40	TOTL NO.	PER- CENT	ACCUM PERCENT
9												
8												
7												
6												
5												
4												
3												
2												
1												
0												
41	X									1	1.16	100.00
40												
39										1	1.16	98.84
38	X									1	1.16	97.68
37	X									2	2.33	95.35
36	X									1	1.16	94.19
35	X											
34										3	3.49	90.70
33	X	X								3	3.49	87.21
32	X	X								4	4.65	82.56
31	X	X								4	4.65	77.91
30	X	X								5	5.81	72.10
29	X	X	X							4	4.65	67.45
28	X	X	X							4	4.65	62.80
27	X	X	X							11	12.79	50.01
26	X	X	X	X	X	X				4	4.65	45.36
25	X	X	X							7	8.14	37.22
24	X	X	X	X						5	5.81	31.41
23	X	X	X							3	3.49	27.92
22	X	X	X							2	2.33	25.59
21	X	X								5	5.81	19.78
20	X	X	X							3	3.49	16.29
19	X	X								4	4.65	11.64
18	X	X	X							3	3.49	8.15
17	X	X	X							3	3.49	4.66
16	X	X	X							3	3.49	1.17
15	X	X	X									

REMARKS

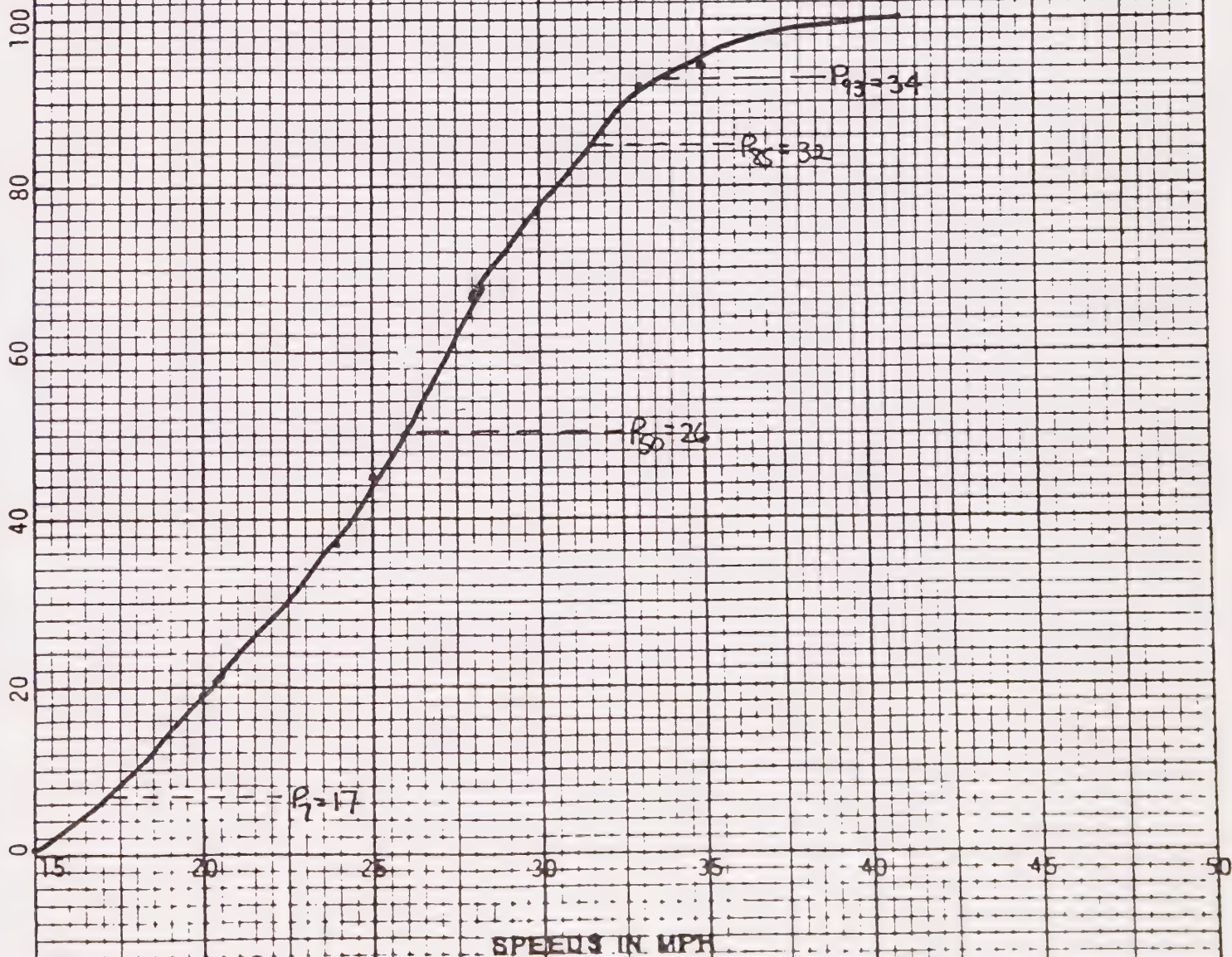
86

1. ACCIDENT RATE = 5.47 MVM
2. ADT = 4,400
3. DOWNGRADE & UPGRADE WITH GOOD SIGHT DISTANCES
4. RESIDENTIAL



FREQUENCY CURVE

COMMUTATIVE PERCENTAGE



CUMULATIVE FREQUENCY CURVE

BELMONT SPOT SPEED ANALYSIS

LOCATION 2800-2900 HALLMARK

DIRECTION BOTH

DATE APRIL 28, 1982

DAY WEDNESDAY

TIME 0925-1010

POSTED SPEED LIMIT 25

STREET WIDTH 48'

OBSERVER J. Snodgrass / N. BRICHACEK

50TH PERCENTILE SPEED 25

85TH PERCENTILE SPEED 29

10 MPH PACE SPEED 20-30

PERCENT IN PACE SPEED 90.20

RANGE OF SPEEDS 15-36

SKEWNESS INDEX 1.33

ANALYSIS BY N. BRICHACEK

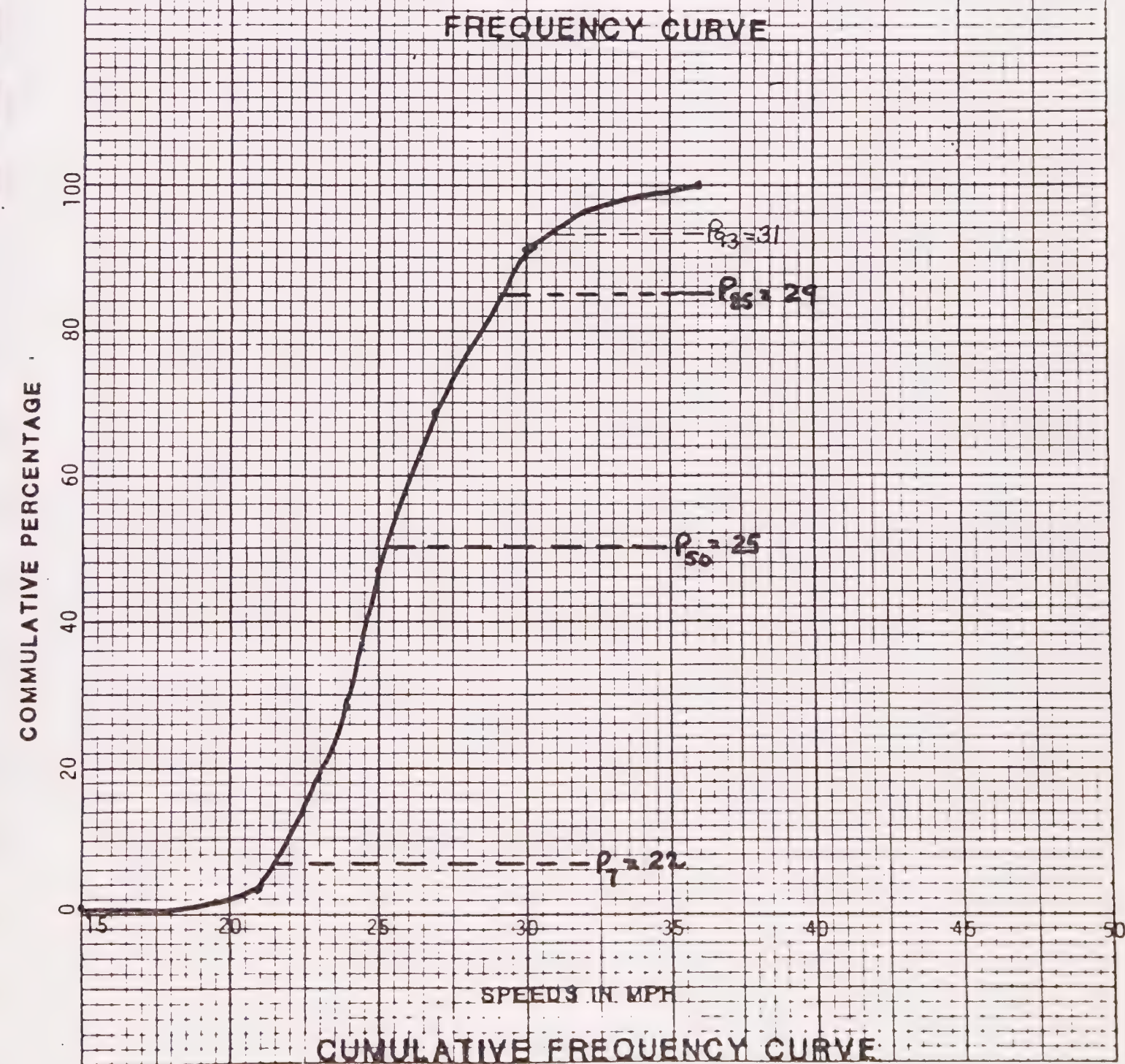
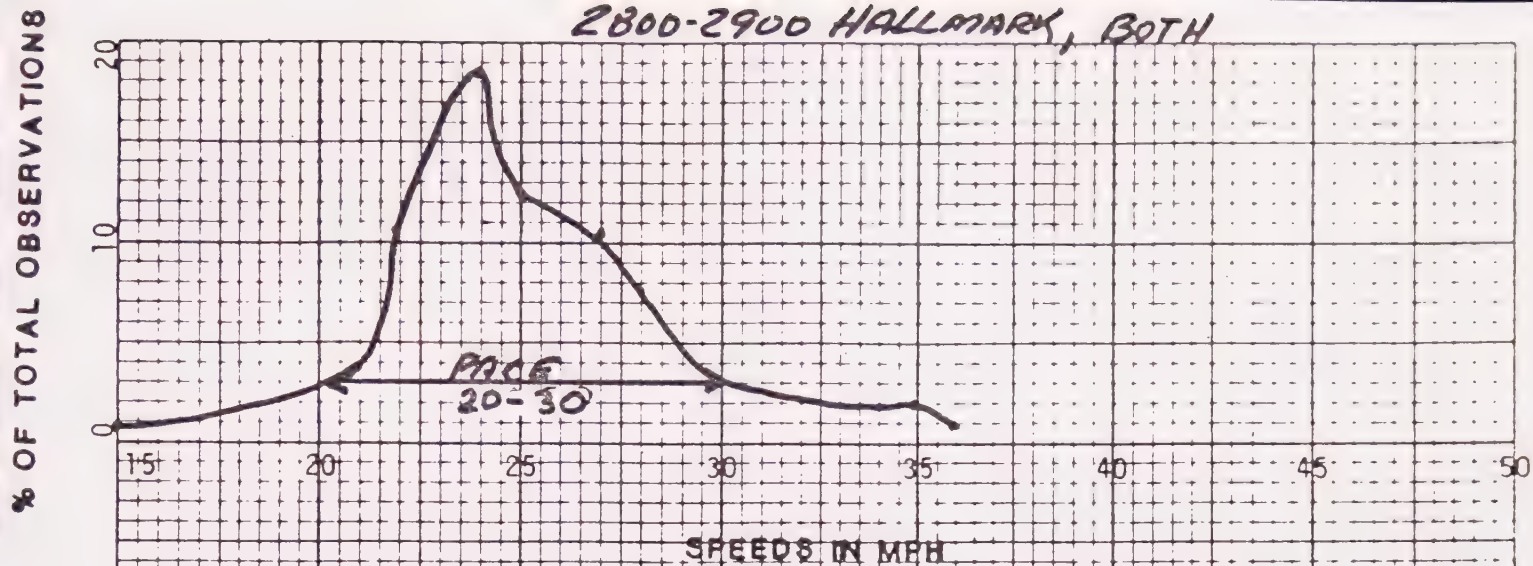
SPEED	NUMBER OF VEHICLES										TOTAL NO.	PERCENT	ACCUM PERCENT
	0	5	10	15	20	25	30	35	40	45			
49													
48													
47													
46													
45													
44													
43													
42													
41													
40													
39													
38													
37											1	0.98	100.00
36	X										2	1.96	98.04
35	X	X											
34													
33											3	2.94	95.10
32	X	X	X								1	0.98	94.12
31	X										3	2.94	91.18
30	X	X	X								4	3.92	87.26
29	X	X	X	X							8	7.84	79.42
28	X	X	X	X	X						11	10.78	68.64
27	X	X	X	X	X	X					9	8.82	59.82
26	X	X	X	X	X	X	X				13	12.75	47.07
25	X	X	X	X	X	X	X	X			14	18.63	28.44
24	X	X	X	X	X	X	X	X	X		10	9.80	18.64
23	X	X	X	X	X	X	X	X	X		11	10.78	7.86
22	X	X	X	X	X	X	X	X	X		4	3.92	3.94
21	X	X	X										
20													
19													
18											1	0.98	2.96
17	X										1	0.98	1.98
16	X										1	0.98	1.00
15	X												

102

REMARKS

1. ACCIDENT RATE = 1.51 MVM
2. ADT = 4,000
3. RESIDENTIAL

2800-2900 HALLMARK, BOTH



BELMONT SPOT SPEED ANALYSIS

LOCATION 1000-1200 ELMER ST
 DIRECTION BOTH 50TH PERCENTILE SPEED 23
 DATE APRIL 29, 1982 85TH PERCENTILE SPEED 27
 DAY THURSDAY 10 MPH PACE SPEED 18-28
 TIME 1455-1530 PERCENT IN PACE SPEED 89.11
 POSTED SPEED LIMIT 25 RANGE OF SPEEDS 15-33
 STREET WIDTH 25' SKEWNESS INDEX 1.00
 OBSERVER J. SNODGRASS / N. BRICHACEK ANALYSIS BY N. BRICHACEK

SPEED	NUMBER OF VEHICLES										TOTAL NO.	PERCENT	ACCUM PERCENT
	0	5	10	15	20	25	30	35	40	45			
9													
8													
47													
16													
15													
44													
43													
32													
31													
40													
39													
38													
37													
36													
35													
34													
33	X										1	0.99	100.00
32													
31											1	0.99	99.01
30	X										1	0.99	98.02
29	X										3	2.97	95.05
28	X	X									9	8.91	86.14
27	X	X	X	X	X	X					6	5.94	80.20
26	X	X	X	X	X						4	3.96	76.24
25	X	X	X	X							16	15.84	60.40
24	X	X	X	X	X	X	X				11	10.54	49.51
23	X	X	X	X	X	X					8	7.92	41.59
22	X	X	X	X	X	X					10	9.90	31.69
21	X	X	X	X	X	X					11	10.89	20.80
20	X	X	X	X	X	X					4	3.96	16.84
19	X	X	X								8	7.92	8.92
18	X	X	X	X	X						2	1.98	6.94
17	X	X									2	1.98	4.96
16	X	X									4	3.96	1.00
15	X	X	X	X									

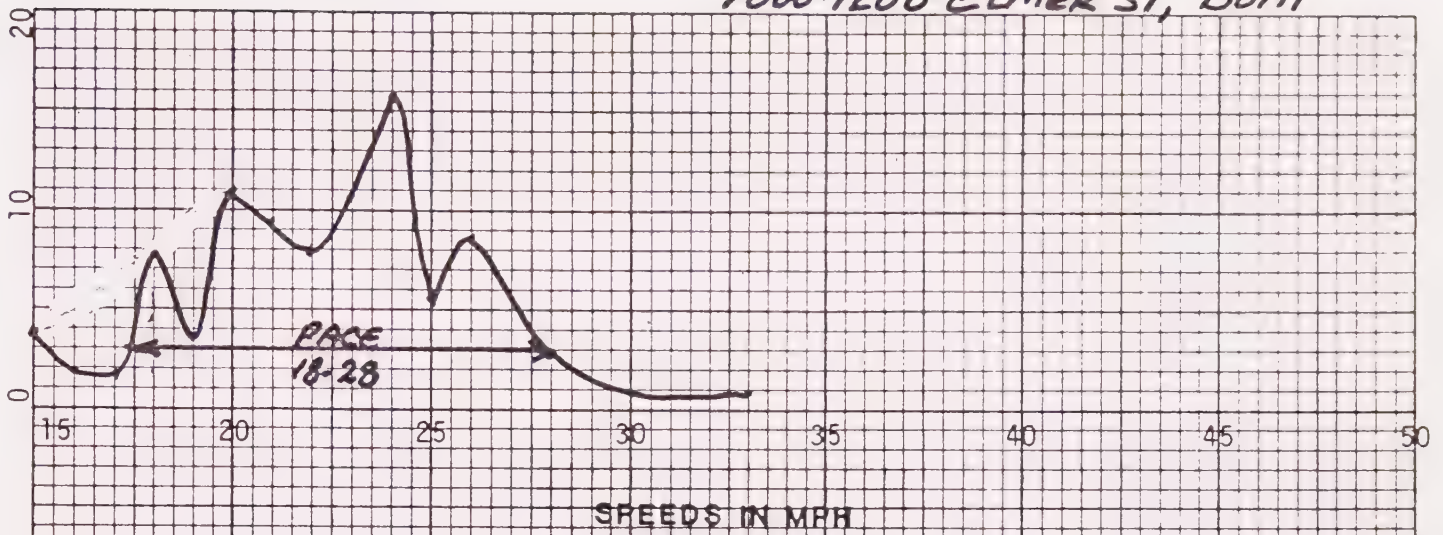
REMARKS

101

1. ACCIDENT RATE = 4/YR
2. ADT = NOT AVAILABLE
3. RESIDENTIAL

1000-1200 ELMER ST, BOTH

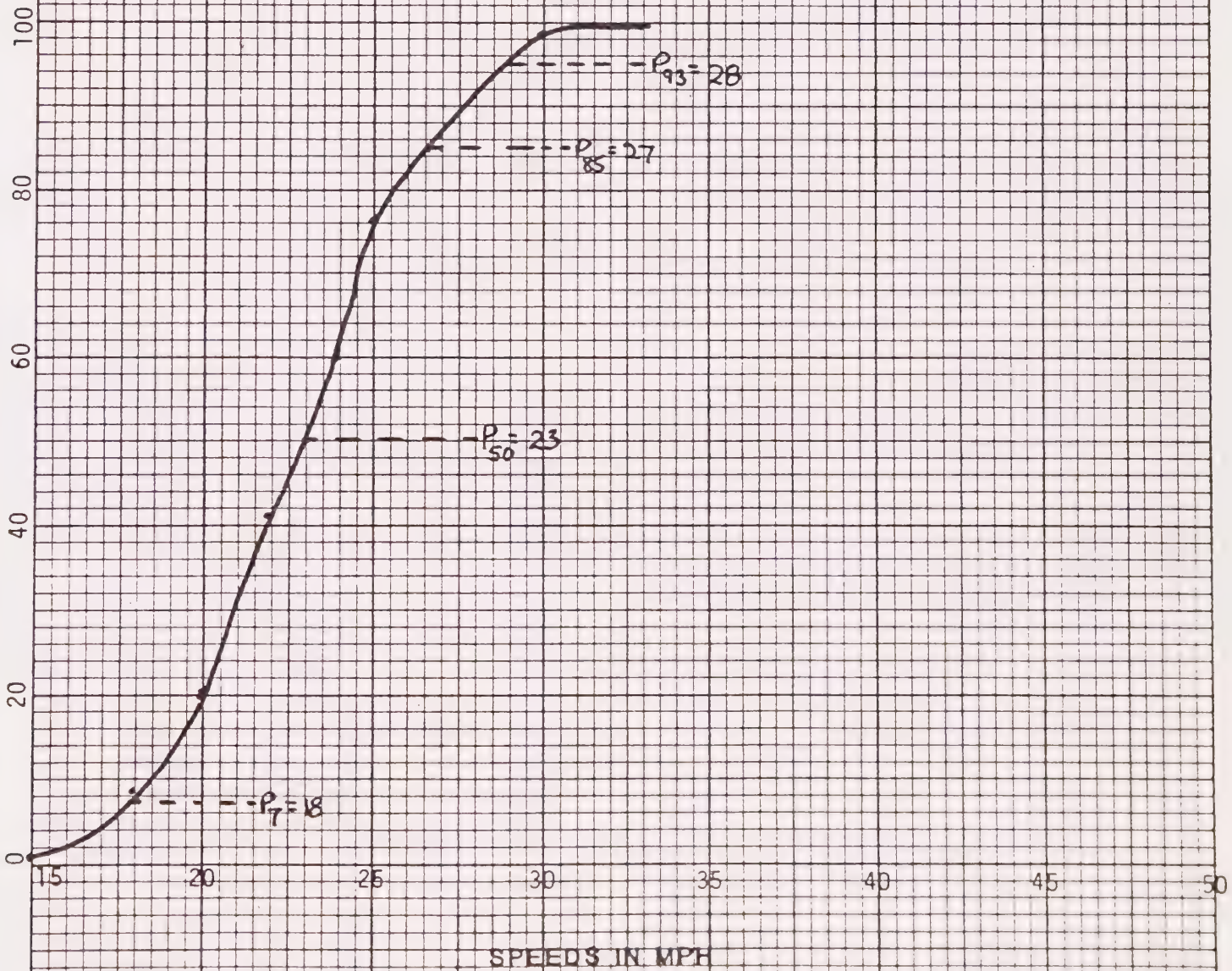
% OF TOTAL OBSERVATIONS



PAGE
18-28

FREQUENCY CURVE

COMMUTATIVE PERCENTAGE



CUMULATIVE FREQUENCY CURVE

BELMONT SPOT SPEED ANALYSIS

LOCATION 2100-2600 CIPRIANI BLVD

DIRECTION BOTH

DATE APRIL 28, 1982

A Y WEDSENDAY

TIME 1015-1100

POSTED SPEED LIMIT 25

STREET WIDTH 25'

OBSERVER J. Snodgrass / N. BRICHACEK

50TH PERCENTILE SPEED 25

85TH PERCENTILE SPEED 28

10 MPH PACE SPEED 20-30

PERCENT IN PACE SPEED 79.12

RANGE OF SPEEDS 15-34

SKEWNESS INDEX 0.77

ANALYSIS BY N. BRICHACEK

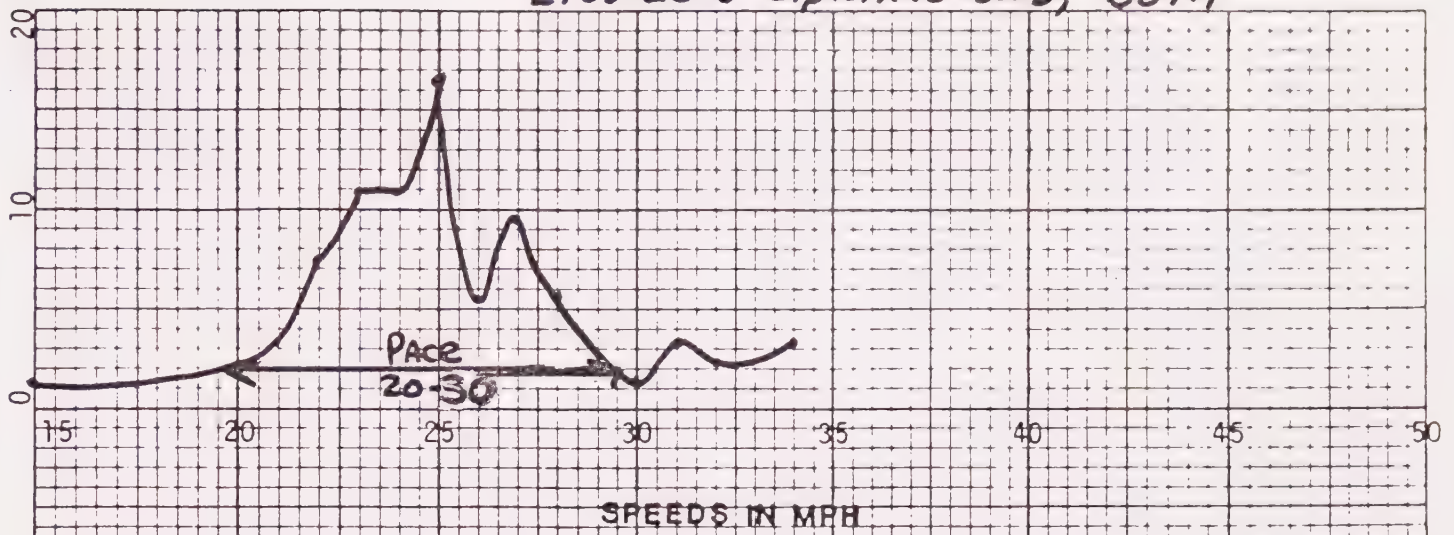
LINE	NUMBER OF VEHICLES	TOTL NO	PER CENT	ACCUM PERCENT
9				
8				
7				
6				
5				
4				
3				
2				
1				
40				
39				
38				
37				
36				
35		3	3.30	100.00
34	XXXX	2	2.20	97.80
33		3	3.30	94.50
32	XXXX	1	1.10	93.40
31	XXXX	1	1.10	92.30
30		5	5.49	86.81
29		9	9.89	76.92
28	XXXXXX	5	5.49	71.43
27	XXXXXXXXXX	15	16.48	54.95
26	XXXXXXXXXXXX	10	10.99	43.96
25	XXXXXXXXXXXX	10	10.99	32.97
24	XXXXXXXXXXXX	7	7.69	25.28
23	XXXXXXXXXX	3	3.30	21.98
22	XXXXXX	6	6.59	15.39
21	XXXXXX	3	3.30	12.09
20	XXXXXX	3	3.30	8.79
19	XXXX	2	2.20	6.59
18	XXXX	2	2.20	4.39
17	XXXX	1	1.10	3.29
16	XXXX			
15	XXXX			

REMARKS

1. ACCIDENT RATE = 5.23 MVM
2. ADT = 7,300
3. WINDING, UPGRADE AND DOWNGRADE, STOP SIGNS, AND LIMITED SIGHT DISTANCES.

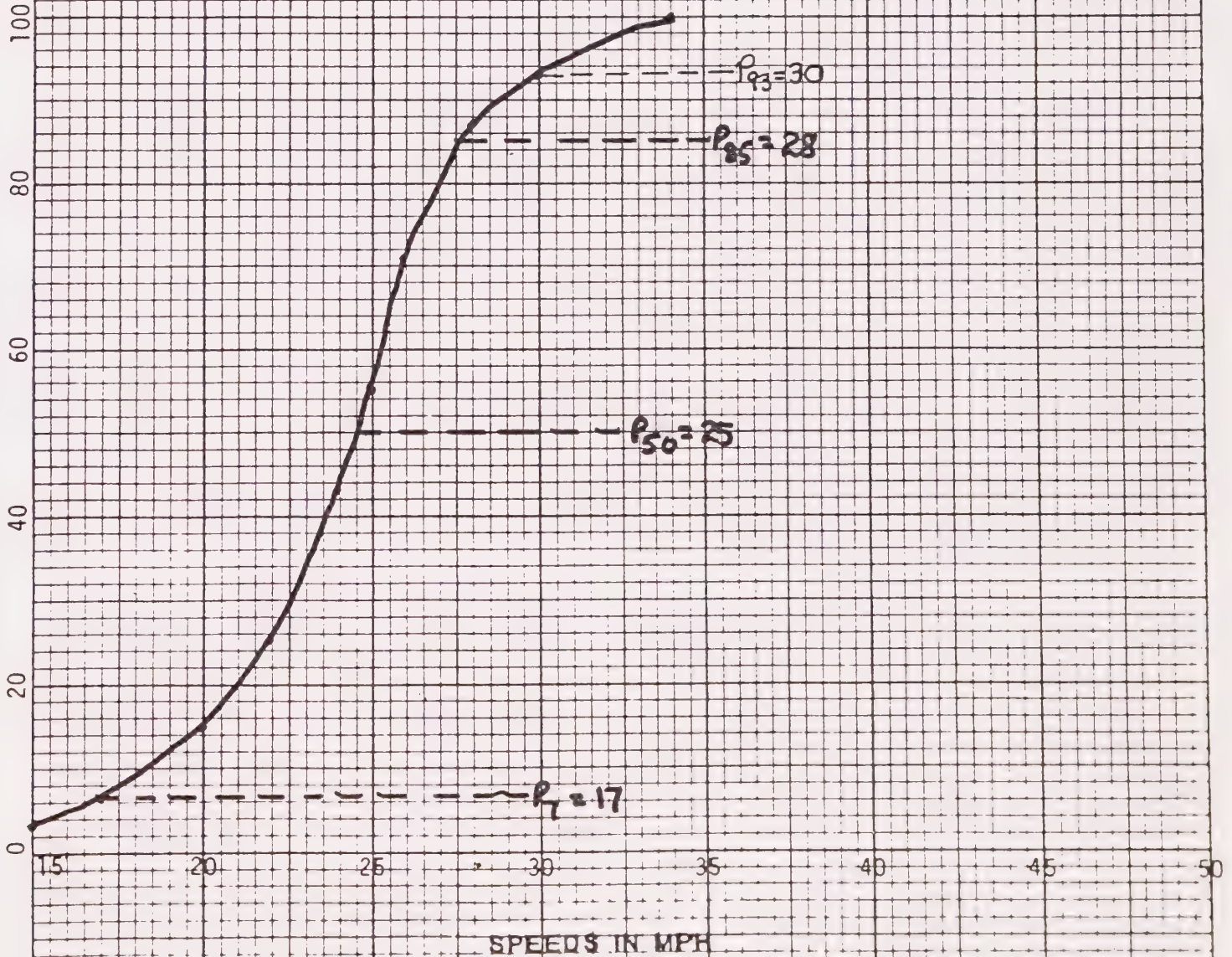
2100-2600 CIPRIANI BLVD, BOTH

% OF TOTAL OBSERVATIONS



FREQUENCY CURVE

COMMUTATIVE PERCENTAGE



CUMULATIVE FREQUENCY CURVE

BELMONT SPOT SPEED ANALYSIS

LOCATION 800-900 RUTH AVENUE

DIRECTION BOTH

DATE APRIL 29, 1982

DAY THURSDAY

TIME 1340-1440

POSTED SPEED LIMIT 25

STREET WIDTH 23'

OBSERVER J. Snodgrass / N. BRICHACEK

50TH PERCENTILE SPEED 29

85TH PERCENTILE SPEED 36

10 MPH PACE SPEED 24-34

PERCENT IN PACE SPEED 64.29

RANGE OF SPEEDS 15-42

SKEWNESS INDEX 1.11

ANALYSIS BY N. BRICHACEK

SPEED	NUMBER OF VEHICLES										TOTAL NO.	PERCENT	ACCUM PERCENT
	0	5	10	15	20	25	30	35	40	45			
9													
8													
7													
6													
5													
4													
3											1	2.38	100.00
2	X										1	2.38	97.62
1	X										1	2.38	95.24
0	X										2	4.76	90.48
39	X												
38													
37											1	2.38	88.10
36	X										3	7.14	80.96
35	X	X									1	2.38	78.58
34	X	X									3	7.14	71.44
33	X	X									4	9.52	61.92
32	X	X	X								1	2.38	59.54
31	X	X									1	2.38	57.16
30	X										3	7.14	50.02
29	X	X	X								1	2.38	47.64
28	X										4	9.52	38.12
27	X	X	X								5	11.90	26.22
26	X	X	X	X							3	7.14	19.08
25	X	X	X								1	2.38	16.70
24	X										2	4.76	11.94
23	X	X									1	2.38	9.56
22	X												
21											2	4.76	4.80
20	X	X											
19													
18													
17													
16											1	2.38	2.42
15	X												

42

REMARKS

1. ACCIDENT RATE = 10/YR
2. RESIDENTIAL
3. UPGRADE/DOWNGRADE TO STATE HIGHWAY

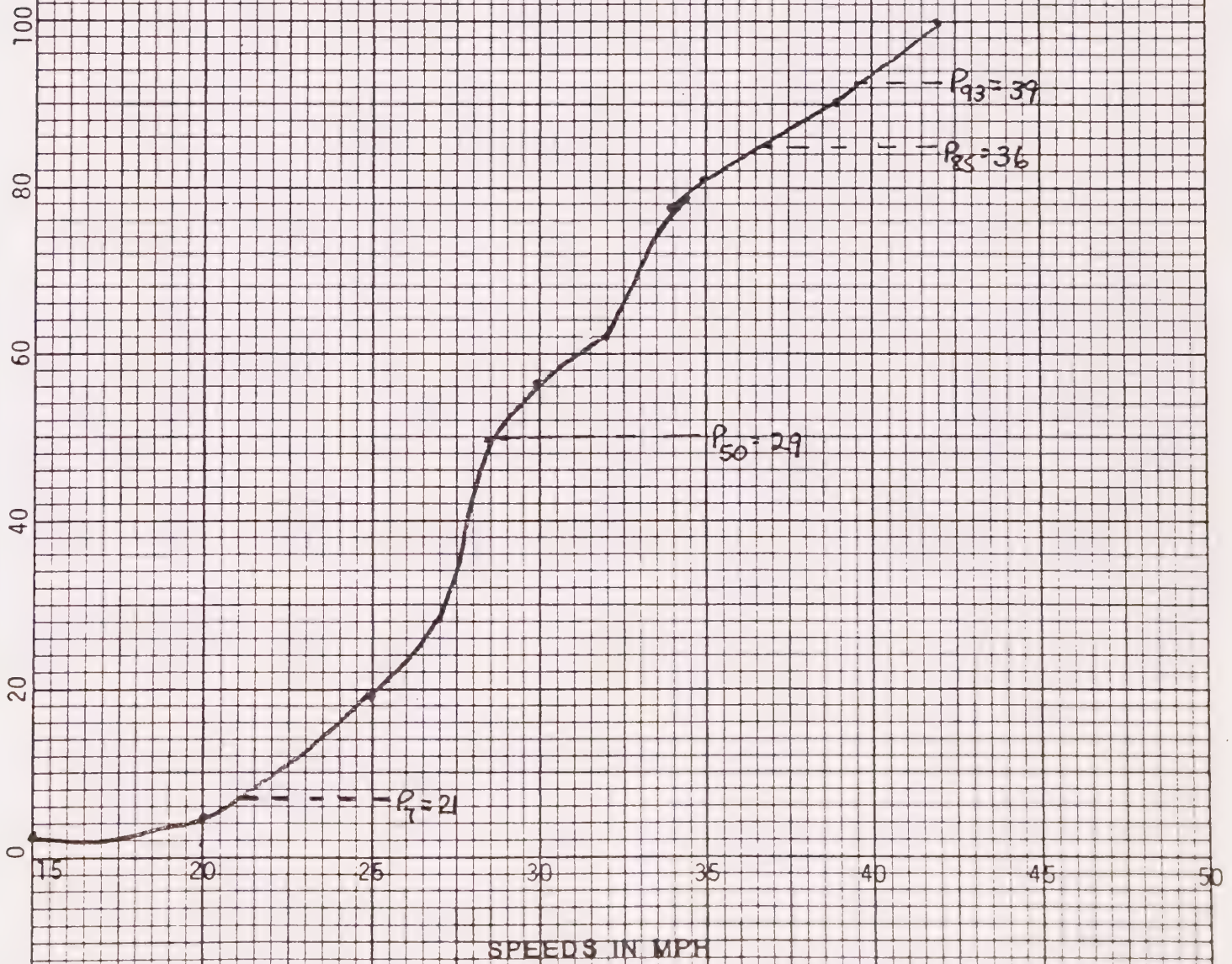
800-900 RUTH AVE, 130TH

% OF TOTAL OBSERVATIONS



FREQUENCY CURVE

CUMULATIVE PERCENTAGE



CUMULATIVE FREQUENCY CURVE

BELMONT SPOT SPEED ANALYSIS

LOCATION 1800-1900 EL VERANO WAY

DIRECTION BOTH

DATE APRIL 28, 1982

A Y WEDNESDAY

TIME 1225-1300

POSTED SPEED LIMIT 25

STREET WIDTH 25'

OBSERVER J. Snodgrass / N. Brinacek

50TH PERCENTILE SPEED 22

85TH PERCENTILE SPEED 26

10 MPH PAGE SPEED 18-28

PERCENT IN RACE SPEED 72.73

RANGE OF SPEEDS 15-31

SKEWNESS INDEX 1.00

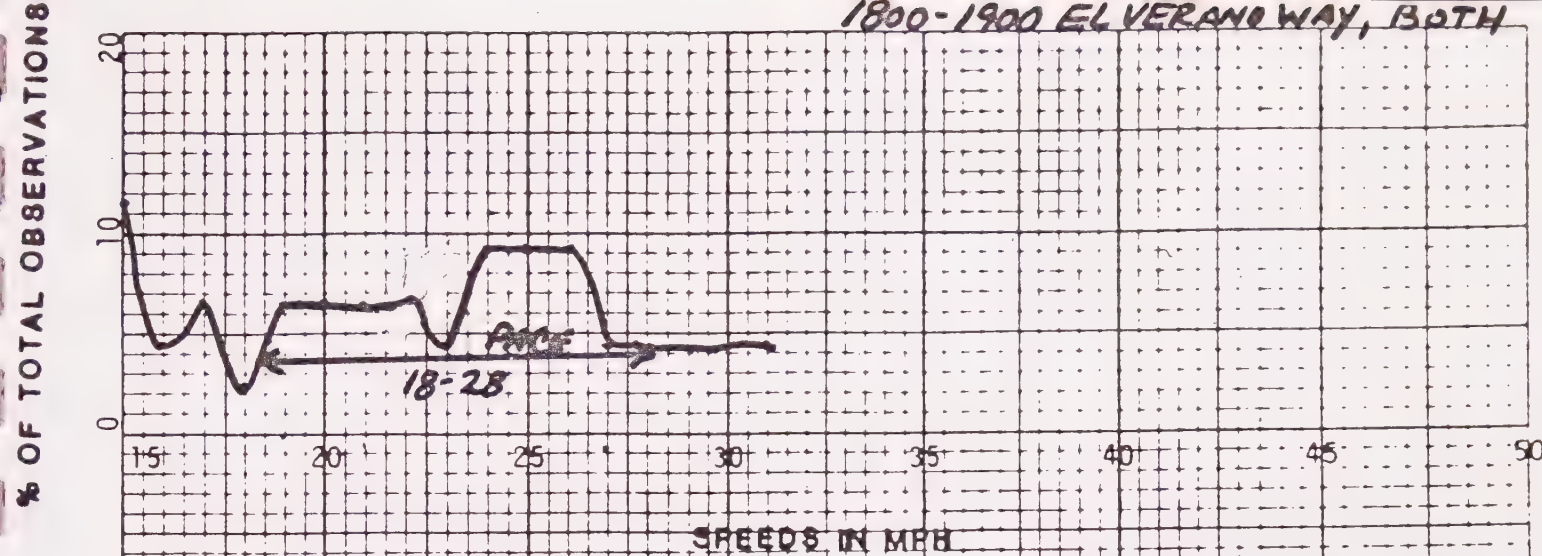
ANALYSIS BY N. BRIGHAM

NUMBER OF VEHICLES	TOTL NQ	PER CENT	ACCUM PERCENT
0			
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
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99			
100			

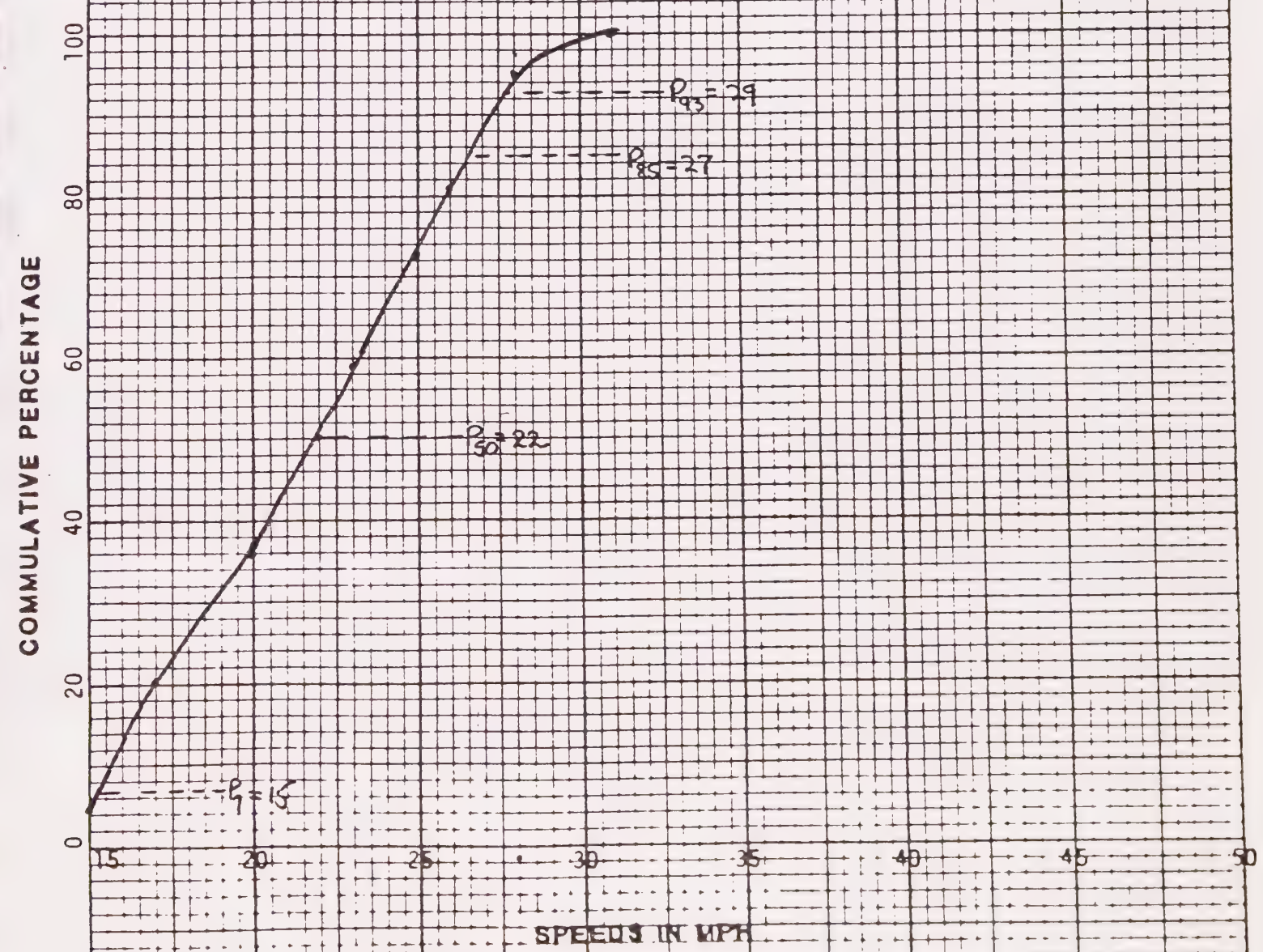
EMARKS

1. ACCIDENT RATE = 0.75/YR
2. ROAD CURVES UPGRADE/DOWNGRADE WITH LIMITED SIGHT DISTANCES
3. RESIDENTIAL

1800-1900 EL VERANO WAY, BOTH



FREQUENCY CURVE



CUMULATIVE FREQUENCY CURVE

BELMONT SPOT SPEED ANALYSIS

LOCATION 300-900 SOUTH Rd

DIRECTION BOTH

DATE APRIL 28, 1982

A Y WEDNESDAY

IME 1300-1400

POSTED SPEED LIMIT 25

STREET WIDTH 20'

BSERVER J. Snodgrass / N. BRICHACIK

50TH PERCENTILE SPEED 24

85TH PERCENTILE SPEED 27

10 MPH PACE SPEED 20-30

PERCENT IN PACE SPEED 70.27

RANGE OF SPEEDS 15-35

SKEWNESS INDEX 1.00

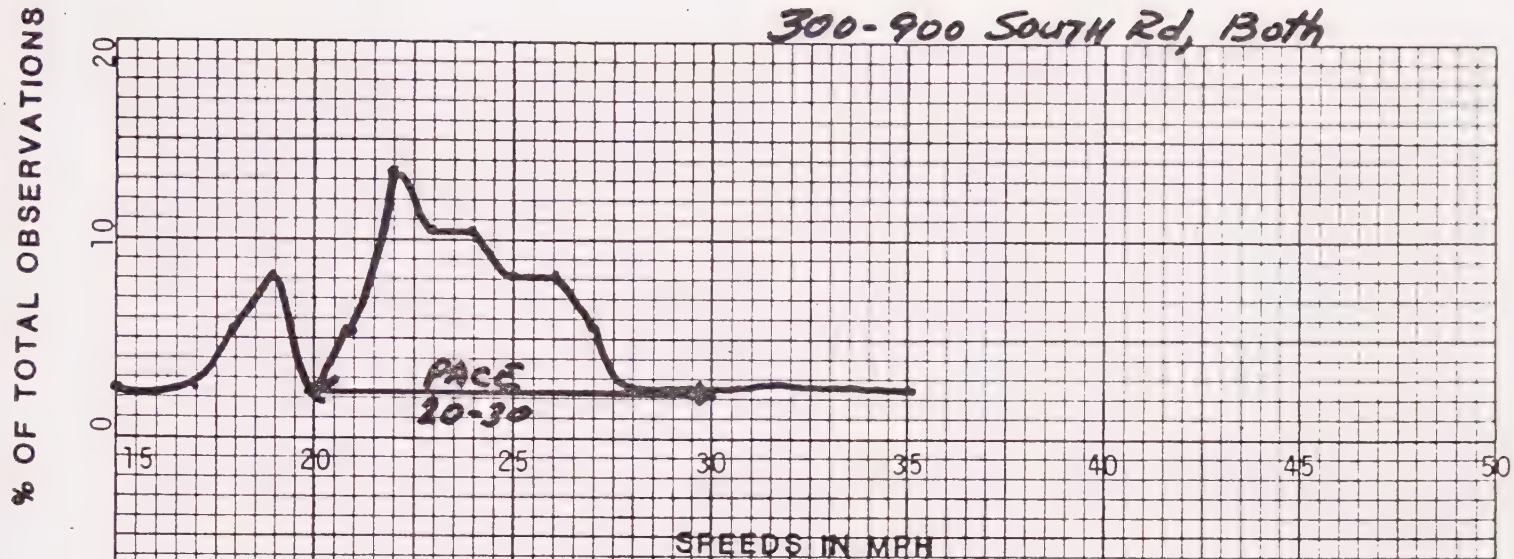
ANALYSIS BY N. BRICHACEK

VEHICLE NO.	NUMBER OF VEHICLES	TOTAL NO.	PERCENT	ACCUM PERCENT
36	1	1	2.70	100.00
35	1	1	2.70	97.30
34	1	1	2.70	94.60
33	1	1	2.70	91.90
32	1	1	2.70	89.20
31	2	2	5.40	83.80
30	3	3	8.11	75.69
29	3	3	8.11	67.58
28	4	4	10.81	56.77
27	4	4	10.81	45.96
26	5	5	13.51	32.45
25	2	2	5.40	27.05
24	1	1	2.70	24.35
23	3	3	8.11	16.24
22	2	2	5.40	10.84
21	1	1	2.70	8.14
20	1	1	2.70	5.44
19	1	1	2.70	2.74
18				
17				
16				
15				

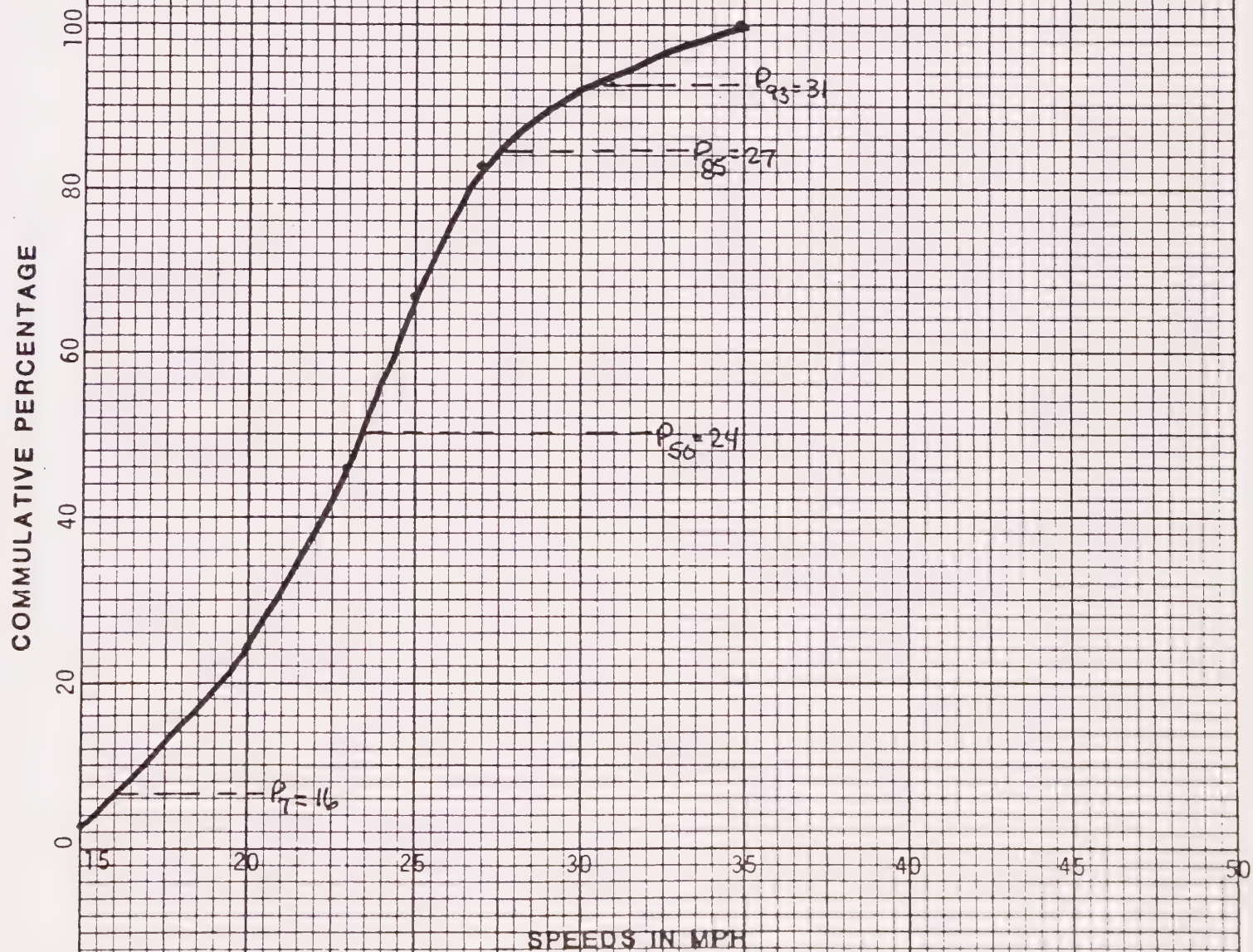
REMARKS

1. ACCIDENT RATE = 2.5/YR
2. NARROW, WINDING WITH "S" CURVES; LIMITED SIGHT DISTANCES
3. RESIDENTIAL

300-900 South Rd, Both



FREQUENCY CURVE



CUMULATIVE FREQUENCY CURVE

BELMONT SPOT SPEED ANALYSIS

LOCATION 1000-1900 CHULAVISTA

DIRECTION BOTH

DATE APRIL 29, 1982

DAY THURSDAY

TIME 1200-1305

POSTED SPEED LIMIT 25

STREET WIDTH 25'

OBSERVER J. Snodgrass/ N. BRICHACEK

50TH PERCENTILE SPEED 27

85TH PERCENTILE SPEED 33

10 MPH PACE SPEED 21-31

PERCENT IN PACE SPEED 81.90

RANGE OF SPEEDS 15-44

SKEWNESS INDEX 1.07

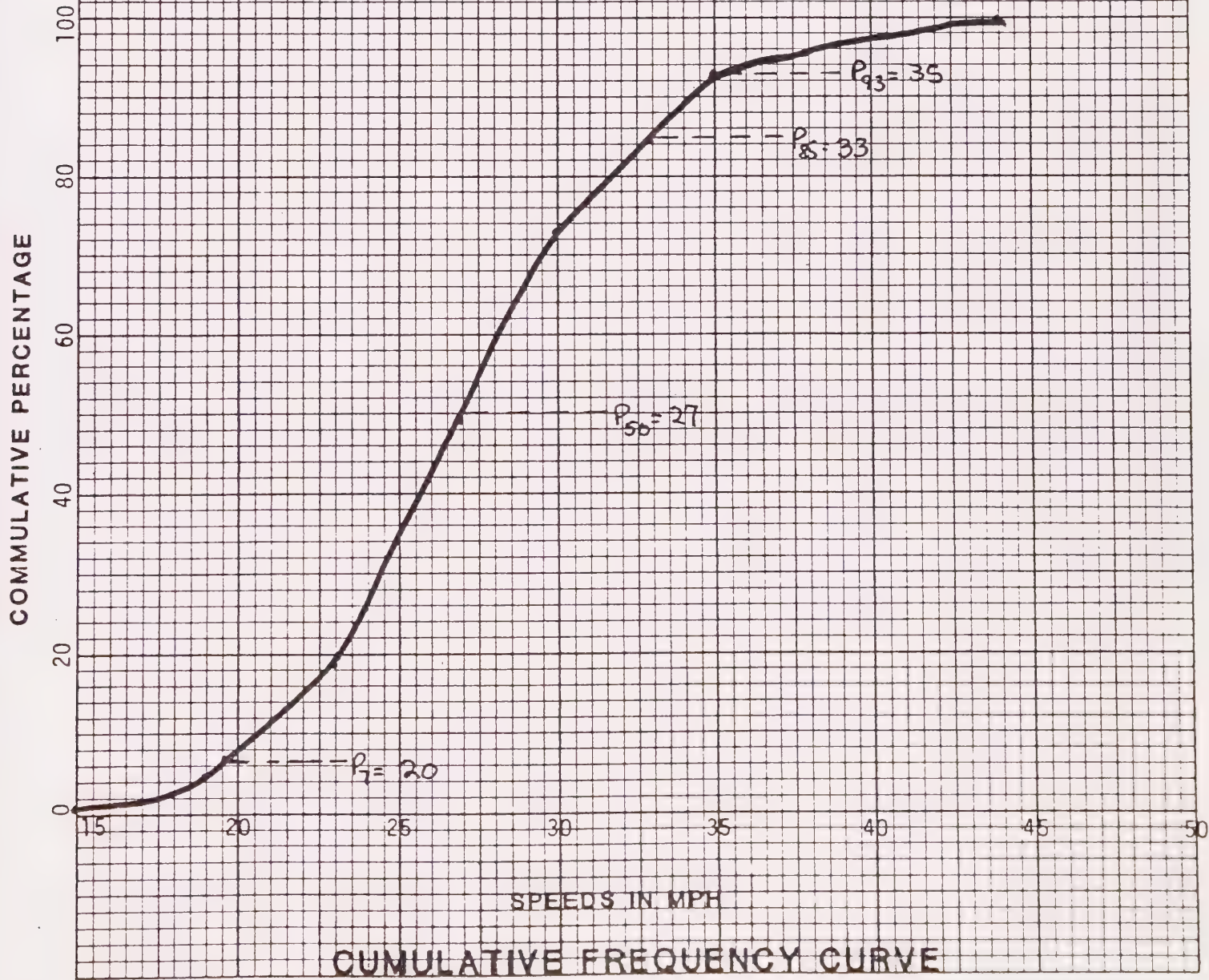
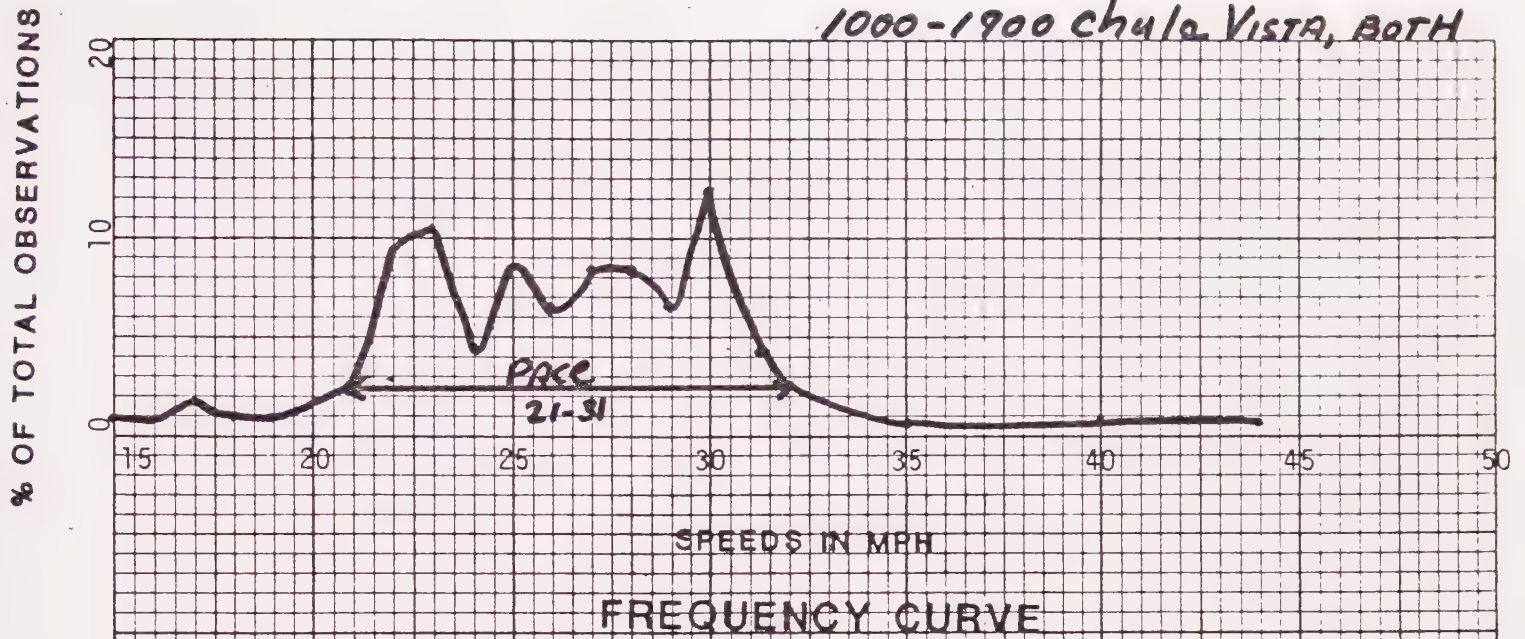
ANALYSIS BY N. BRICHACEK

SPEED	NUMBER OF VEHICLES										TOTAL NO.	PERCENT	ACCUM PERCENT
	0	5	10	15	20	25	30	35	40	45			
49													
48													
47													
46													
45											1	0.95	100.00
44	X										1	0.95	99.05
43											1	0.95	98.01
42	X										1	0.95	97.15
41	X										1	0.95	96.02
40	X										1	0.95	95.25
39	X										1	0.95	94.03
38	X										1	0.95	93.35
37	X										1	0.95	92.40
36											1	0.95	91.45
35	X										1	0.95	88.59
34	X										1	0.95	85.73
33	X										3	2.86	73.35
32	X	X									3	2.86	66.68
31	X	X									3	2.86	58.11
30	X	X	X	X	X	X	X	X	X	X	13	12.38	49.54
29	X	X	X	X	X	X	X	X	X	X	7	6.67	42.87
28	X	X	X	X	X	X	X	X	X	X	9	8.57	34.30
27	X	X	X	X	X	X	X	X	X	X	9	8.57	29.54
26	X	X	X	X	X	X	X	X	X	X	7	6.67	19.06
25	X	X	X	X	X	X	X	X	X	X	9	8.57	9.54
24	X	X	X	X	X	X	X	X	X	X	5	4.76	6.68
23	X	X	X	X	X	X	X	X	X	X	11	10.48	5.73
22	X	X	X	X	X	X	X	X	X	X	10	9.52	4.78
21	X	X	X	X	X	X	X	X	X	X	3	2.86	2.88
20	X	X	X	X	X	X	X	X	X	X	1	0.95	1.93
19	X	X	X	X	X	X	X	X	X	X	1	0.95	0.98
18	X	X	X	X	X	X	X	X	X	X	2	0.95	
17	X	X	X	X	X	X	X	X	X	X	1	0.95	
16	X	X	X	X	X	X	X	X	X	X	1	0.95	
15	X	X	X	X	X	X	X	X	X	X	1	0.95	

REMARKS

1. ACCIDENT RATE = 14.15 MVM
2. ADT = 2,200
3. DOWNGRADE/UPGRADE WITH "S" CURVE OF LIMITED SIGHT DISTANCE
4. RESIDENTIAL

1000-1900 Chula Vista, BOTH



BELMONT SPOT SPEED ANALYSIS

LOCATION 900-2000 NOTRE DAME AVENUE
 DIRECTION BOTH 50TH PERCENTILE SPEED 26
 DATE APRIL 29, 1982 85TH PERCENTILE SPEED 31
 DAY THURSDAY 10 MPH PACE SPEED 20-30
 TIME 1230-1335 PERCENT IN PACE SPEED 74.80
 POSTED SPEED LIMIT 25 RANGE OF SPEEDS 15-42
 STREET WIDTH 18' SKEWNESS INDEX 1.00
 OBSERVER J. SNOODGRASS / N. BRICHACEK ANALYSIS BY N. BRICHACEK

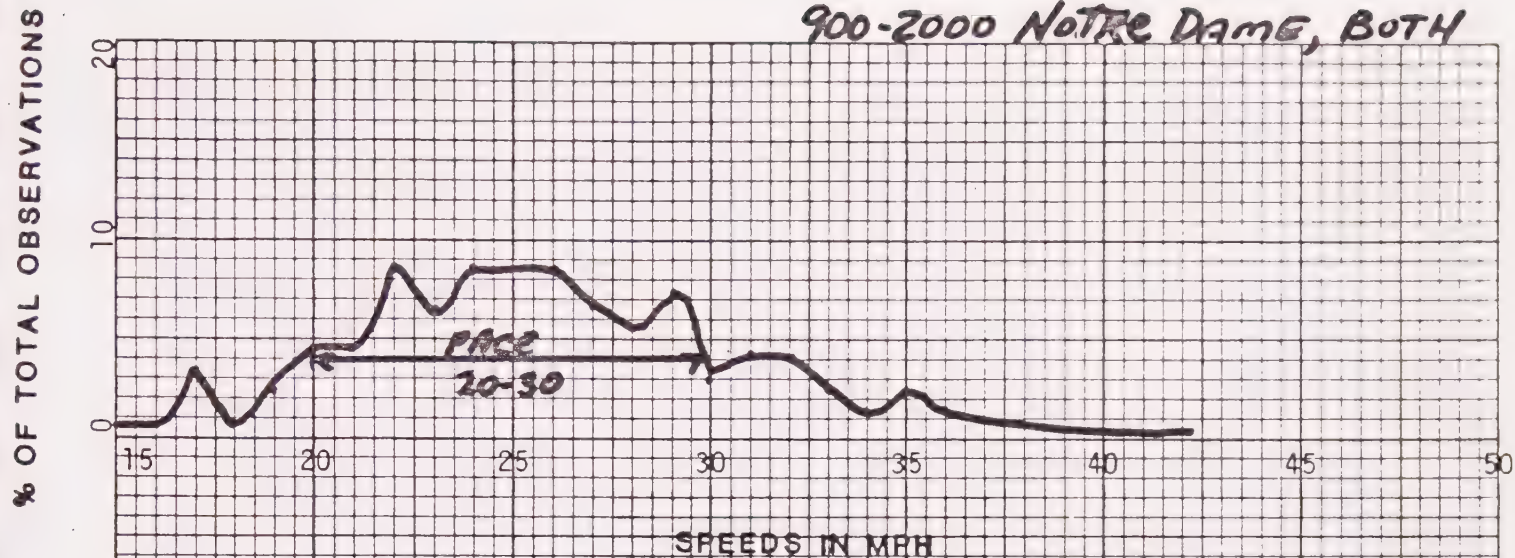
SPEED	NUMBER OF VEHICLES										TOTAL NO.	PERCENT	ACCUM PERCENT
	0	5	10	15	20	25	30	35	40	45			
42	X										1	0.81	100.00
41													
40													
39													
38													
37											2	1.63	98.37
36	X	X									3	2.44	95.93
35	X	X	X								2	1.63	94.30
34	X	X	X								3	2.44	91.86
33	X	X	X								5	4.07	87.79
32	X	X	X	X							5	4.07	83.72
31	X	X	X	X							4	3.25	80.47
30	X	X	X	X	X						9	7.32	73.15
29	X	X	X	X	X						7	5.69	67.46
28	X	X	X	X	X						8	6.50	60.96
27	X	X	X	X	X						11	8.94	52.02
26	X	X	X	X	X						11	8.94	43.08
25	X	X	X	X	X						11	8.94	34.14
24	X	X	X	X	X						8	6.50	27.64
23	X	X	X	X	X						11	8.94	18.70
22	X	X	X	X	X						6	4.88	13.82
21	X	X	X	X	X						6	4.88	8.94
20	X	X	X	X	X						3	2.44	6.50
19	X	X	X	X	X						1	0.81	5.69
18	X	X	X	X	X						4	3.25	2.44
17	X	X	X	X	X						1	0.81	1.63
16	X	X	X	X	X						1	0.81	0.82
15	X	X	X	X	X								

123

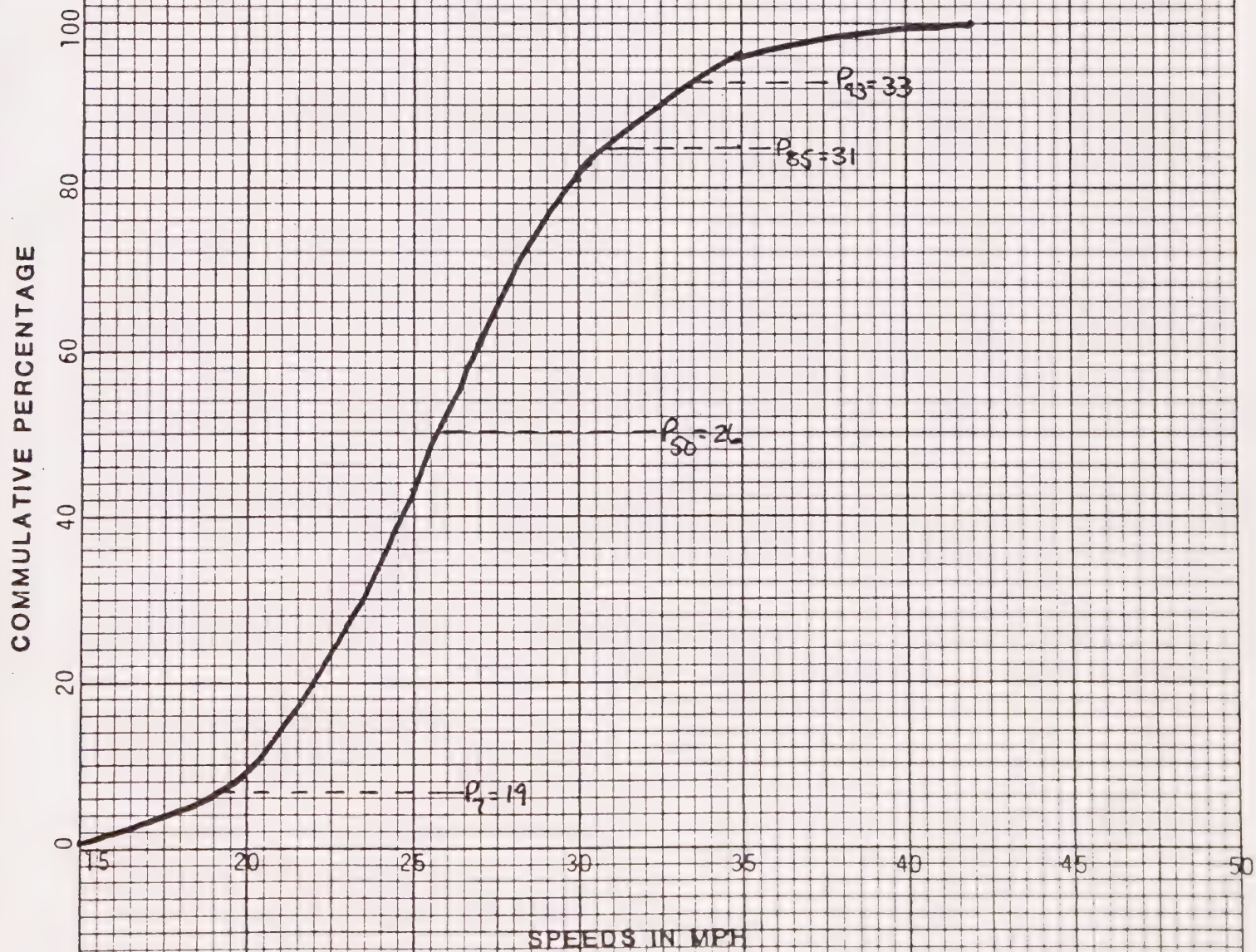
REMARKS

1. ACCIDENT RATE = 9.09 MVM
2. ADT = 2,500
3. WINDING, UPGRADE/DOWNGRADE WITH STOP SIGNS AND LIMITED SIGHT DISTANCES
4. RESIDENTIAL WITH ONE SCHOOL

900-2000 Notre Dame, BOTH



FREQUENCY CURVE



CUMULATIVE FREQUENCY CURVE

BELMONT SPOT SPEED ANALYSIS

LOCATION 200-900 HILLER ST

DIRECTION BOTH

DATE APRIL 28, 1982

DAY WEDNESDAY

TIME 1450-1510

POSTED SPEED LIMIT 25

STREET WIDTH 37'

OBSERVER J. Snodgrass / N. BRICHACEK

50TH PERCENTILE SPEED 25

85TH PERCENTILE SPEED 30

10 MPH PACE SPEED 20-30

PERCENT IN PACE SPEED 80.95

RANGE OF SPEEDS 15-45

SKEWNESS INDEX 1.17

ANALYSIS BY N. BRICHACEK

VEHICLE SPEED	NUMBER OF VEHICLES	TOTAL NO.	PERCENT	ACCUM PERCENT
49				
48				
47				
46				
45	X	1	1.59	100.00
44				
43				
42				
41				
40				
39				
38				
37				
36				
35				
34	X	1	1.59	98.41
33				
32	X	1	1.59	96.82
31	X	4	6.35	90.47
30	X	1	1.59	88.88
29	X	1	1.59	87.29
28	X	2	3.17	84.12
27	X	7	11.11	73.01
26	X	5	7.94	65.07
25	X	6	9.52	55.55
24	X	10	15.87	39.68
23	X	6	9.52	30.16
22	X	5	7.94	22.22
21	X	7	11.11	11.11
20	X	1	1.59	9.52
19	X	1	1.59	7.93
18	X	2	3.17	4.76
17	X	1	1.59	3.17
16				
15	X	1	1.59	1.58

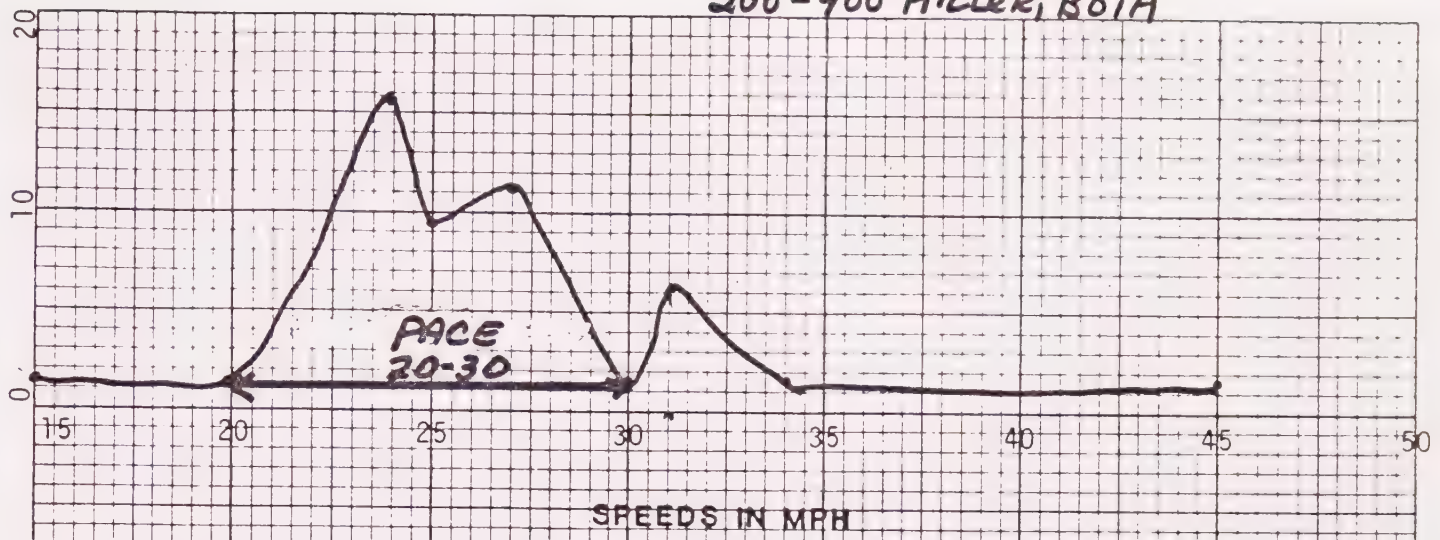
63

REMARKS

1. ACCIDENT RATE = 3.50 MVM
2. ADT = 5,500
3. RESIDENTIAL WITH ONE SCHOOL

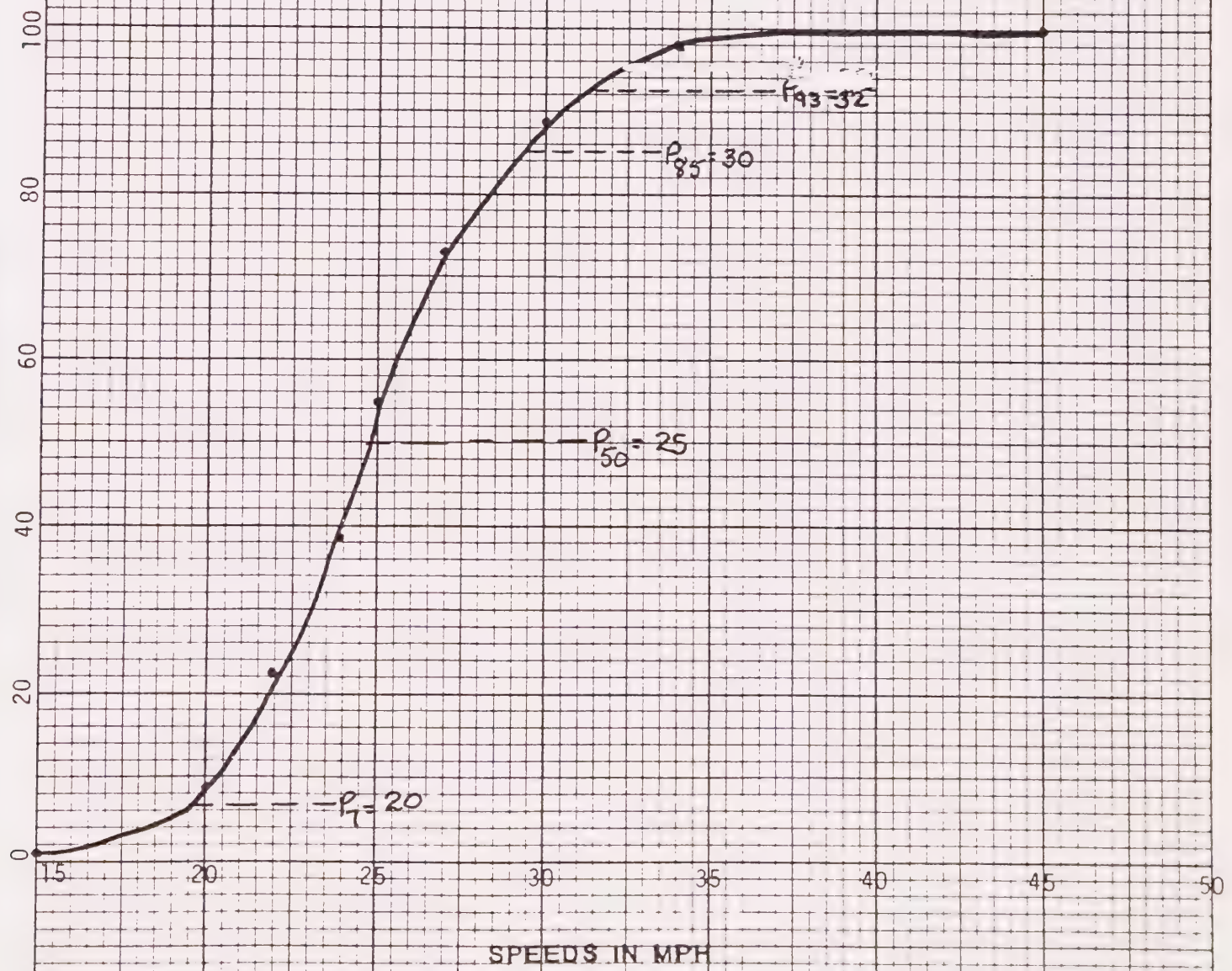
200-900 HILLER, BOTH

% OF TOTAL OBSERVATIONS



FREQUENCY CURVE

COMMULATIVE PERCENTAGE



CUMULATIVE FREQUENCY CURVE

BELMONT SPOT SPEED ANALYSIS

LOCATION 1000-1200 HILLER ST.

DIRECTION BOTH

DATE —

DAY —

TIME —

POSTED SPEED LIMIT 25

STREET WIDTH 27'

OBSERVER J. SNODGRASS / N. BRICHACEK

50TH PERCENTILE SPEED —

85TH PERCENTILE SPEED —

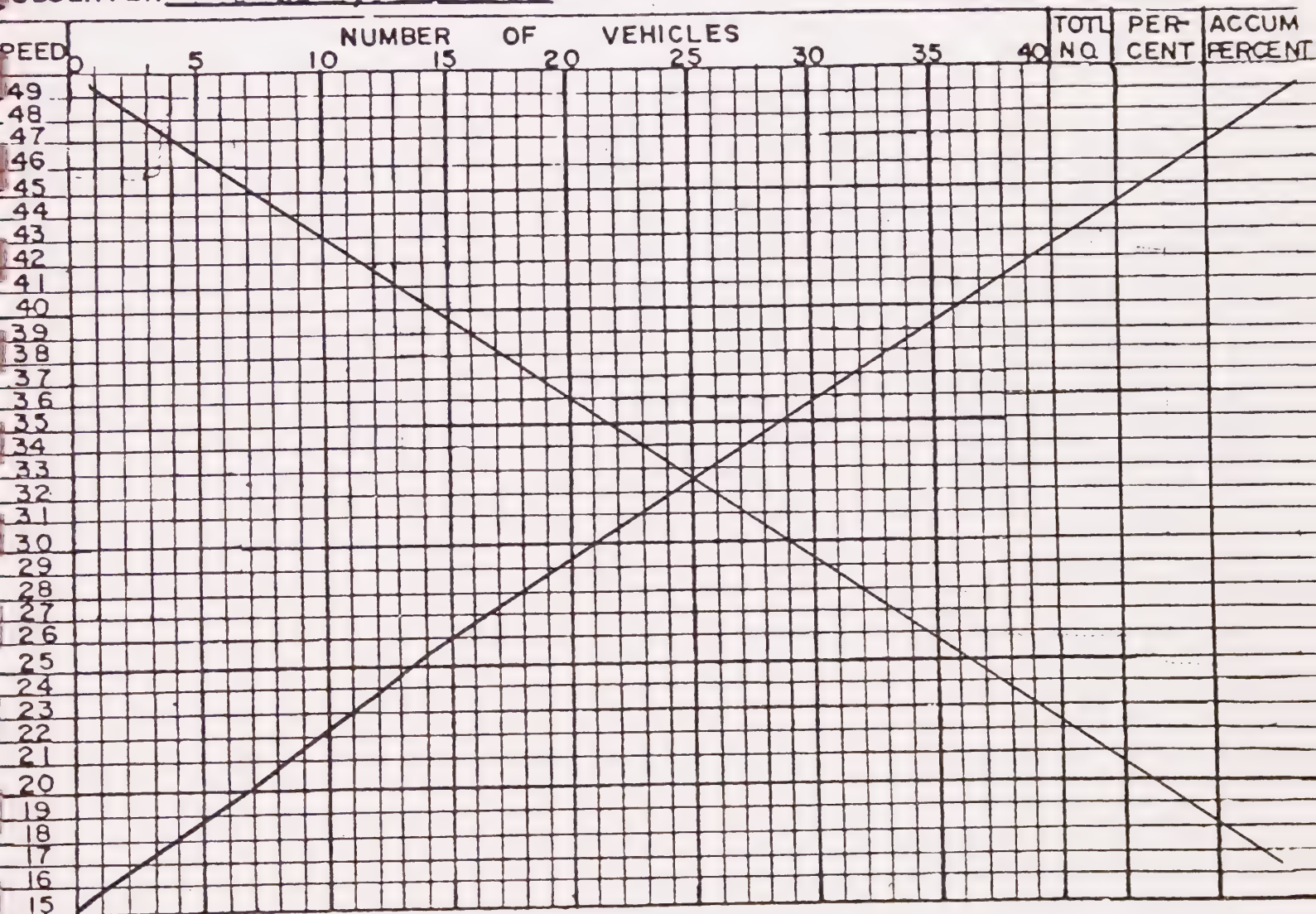
10 MPH PACE SPEED —

PERCENT IN PACE SPEED —

RANGE OF SPEEDS —

SKEWNESS INDEX —

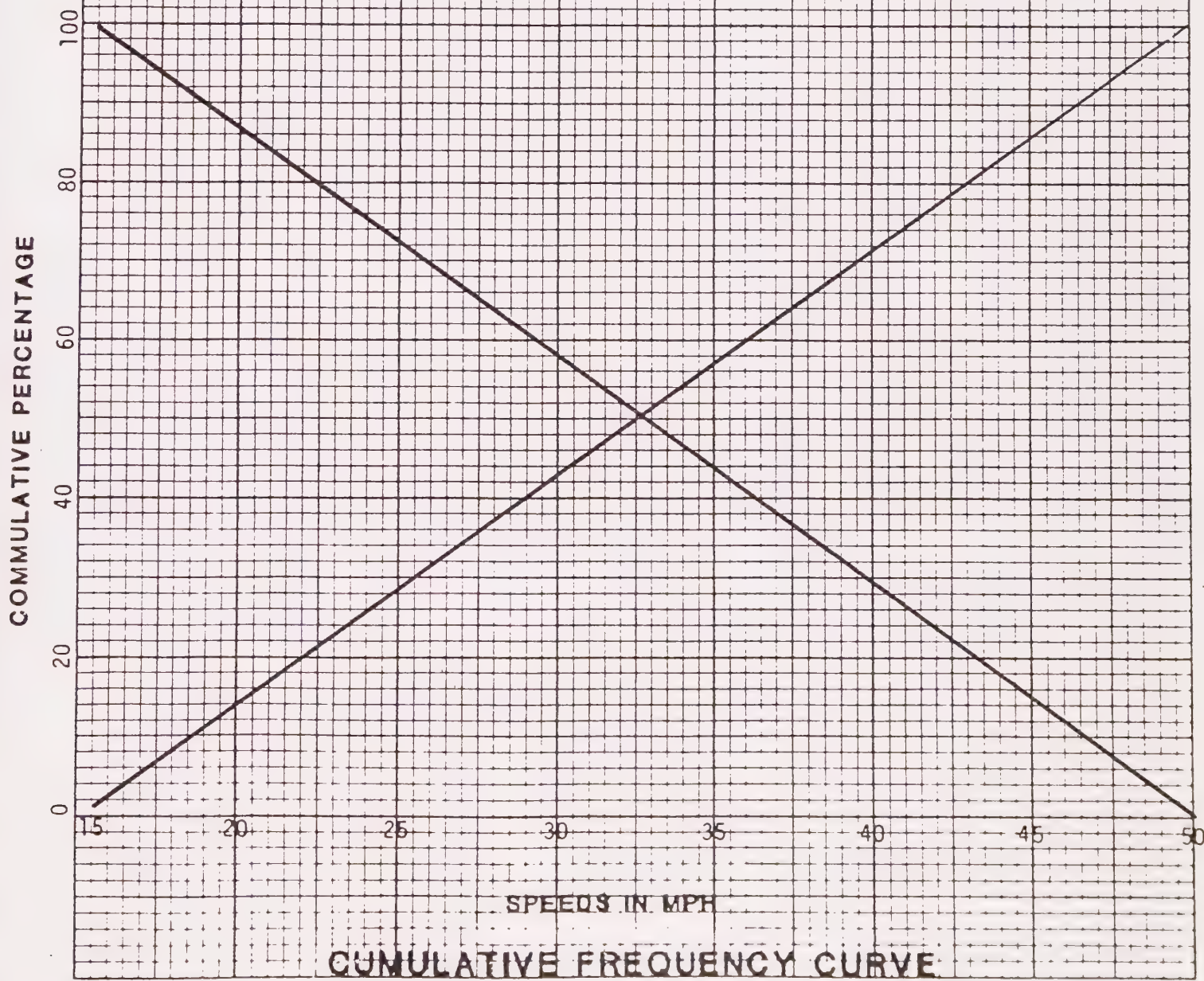
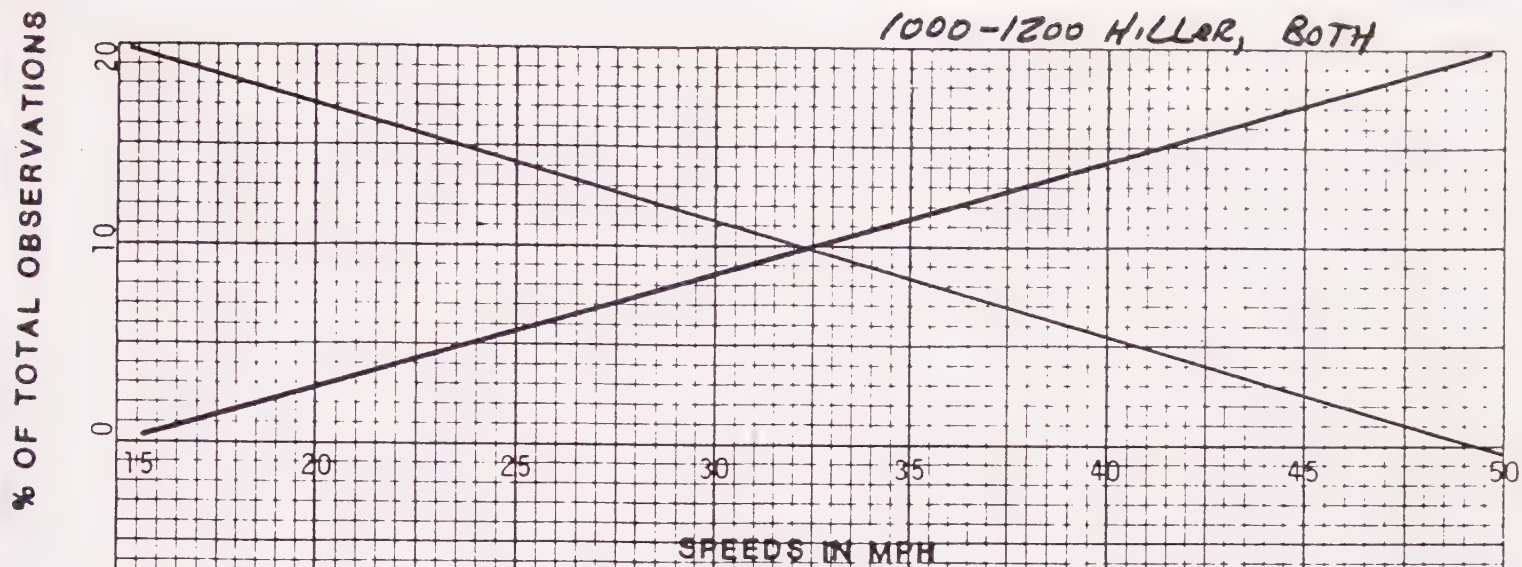
ANALYSIS BY N. BRICHACEK



REMARKS

1. OMITTED DUE TO HOMEVIEW GATE (NO THRU STREET)

1000-1200 HILLAR, BOTH



BELMONT SPOT SPEED ANALYSIS

LOCATION 300-600 CHESTERTON AVENUE
 DIRECTION BOTH 50TH PERCENTILE SPEED 23
 DATE MAY 3, 1982 85TH PERCENTILE SPEED 29
 DAY MONDAY 10 MPH PACE SPEED 23-33
 TIME 0915-1015 PERCENT IN PACE SPEED 41.67
 POSTED SPEED LIMIT 25 RANGE OF SPEEDS 15-41
 STREET WIDTH 30' SKEWNESS INDEX 1.12
 OBSERVER J. SNOODGRASS / N. BRICHACEK ANALYSIS BY N. BRICHACEK

SPEED	0	5	10	15	20	25	30	35	40	TOTAL NO.	PERCENT	ACCUM PERCENT
49												
48												
47												
46												
45												
44												
43												
42												
41	X									1	1.39	100.00
40												
39												
38												
37												
36										1	1.39	98.61
35	X									1	1.39	97.22
34	X									1	1.39	95.83
33	X											
32										1	1.39	94.44
31	X									4	5.56	88.88
30	X	X								2	2.78	86.10
29	X	X								5	6.94	79.16
28	X	X	X							4	5.56	73.60
27	X	X	X							5	6.94	66.66
26	X	X	X							2	2.78	63.88
25	X	X								5	6.94	56.94
24	X	X	X							1	1.39	55.55
23	X	X	X							8	11.11	44.44
22	X	X	X	X						5	6.94	37.50
21	X	X	X							5	6.94	30.56
20	X	X	X							5	6.94	23.62
19	X	X								2	2.78	20.84
18	X	X								1	1.39	19.45
17	X									1	1.39	18.06
16	X									12	16.67	1.39
15	X	X	X	X	X	X	X	X	X			

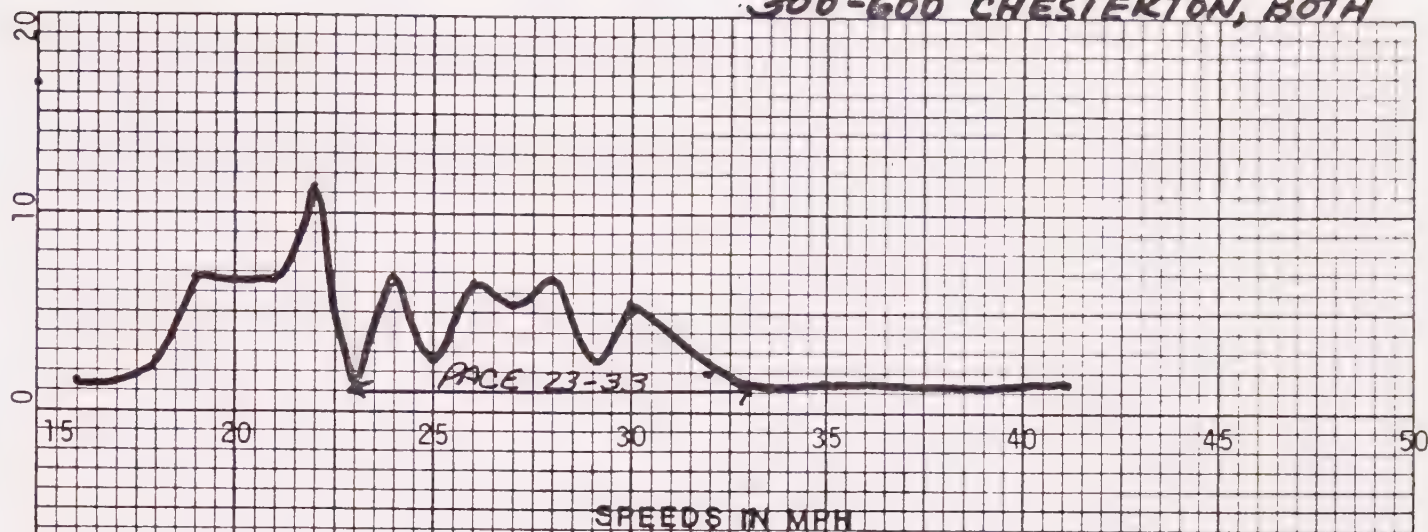
REMARKS

72

1. ACCIDENT RATES = 0/YR
2. RESIDENTIAL

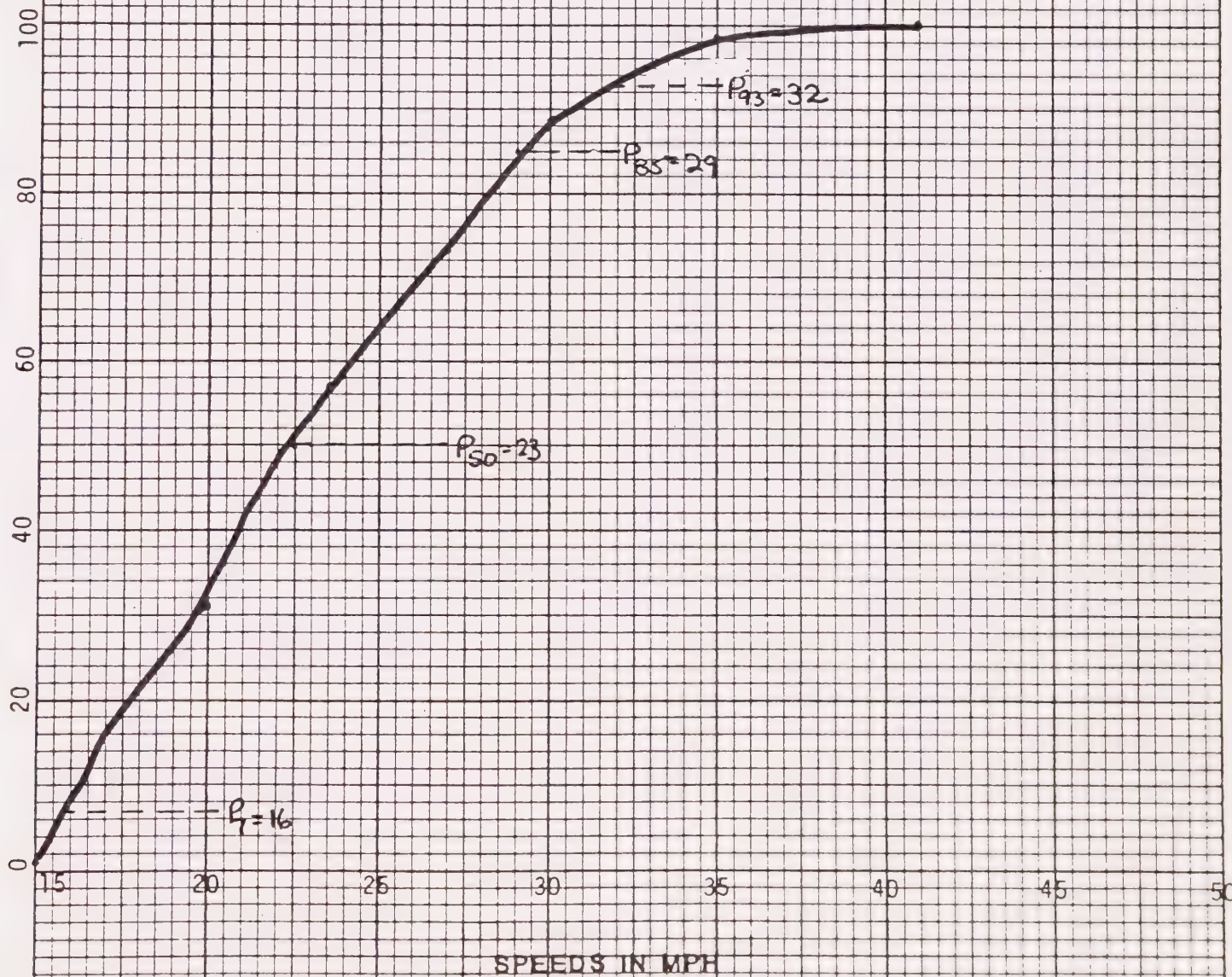
300-600 CHESTERTON, BOTH

% OF TOTAL OBSERVATIONS



FREQUENCY CURVE

COMMUTATIVE PERCENTAGE



CUMULATIVE FREQUENCY CURVE

BELMONT SPOT SPEED ANALYSIS

LOCATION SAN JUAN BOULEVARD, 2800-

DIRECTION BOTH

DATE APRIL 29, 1982

DAY THURSDAY

TIME 0950-1055

POSTED SPEED LIMIT 25

STREET WIDTH 24'

OBSERVER J. Snodgrass / N. BRICHACEK

50TH PERCENTILE SPEED 27

85TH PERCENTILE SPEED 32

10 MPH PACE SPEED 22-32

PERCENT IN PACE SPEED 75.00

RANGE OF SPEEDS 15-35

SKEWNESS INDEX 0.92

ANALYSIS BY N. BRICHACEK

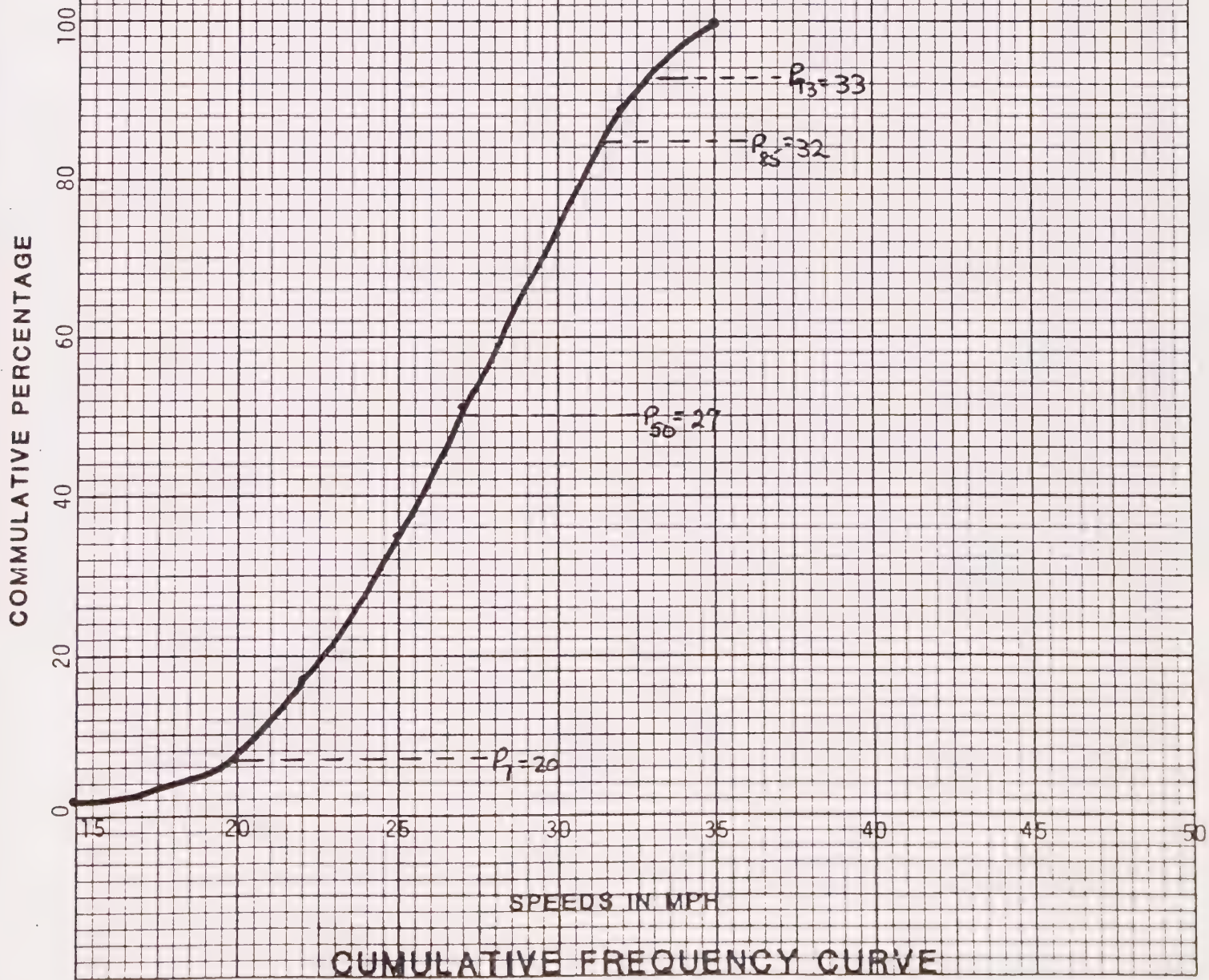
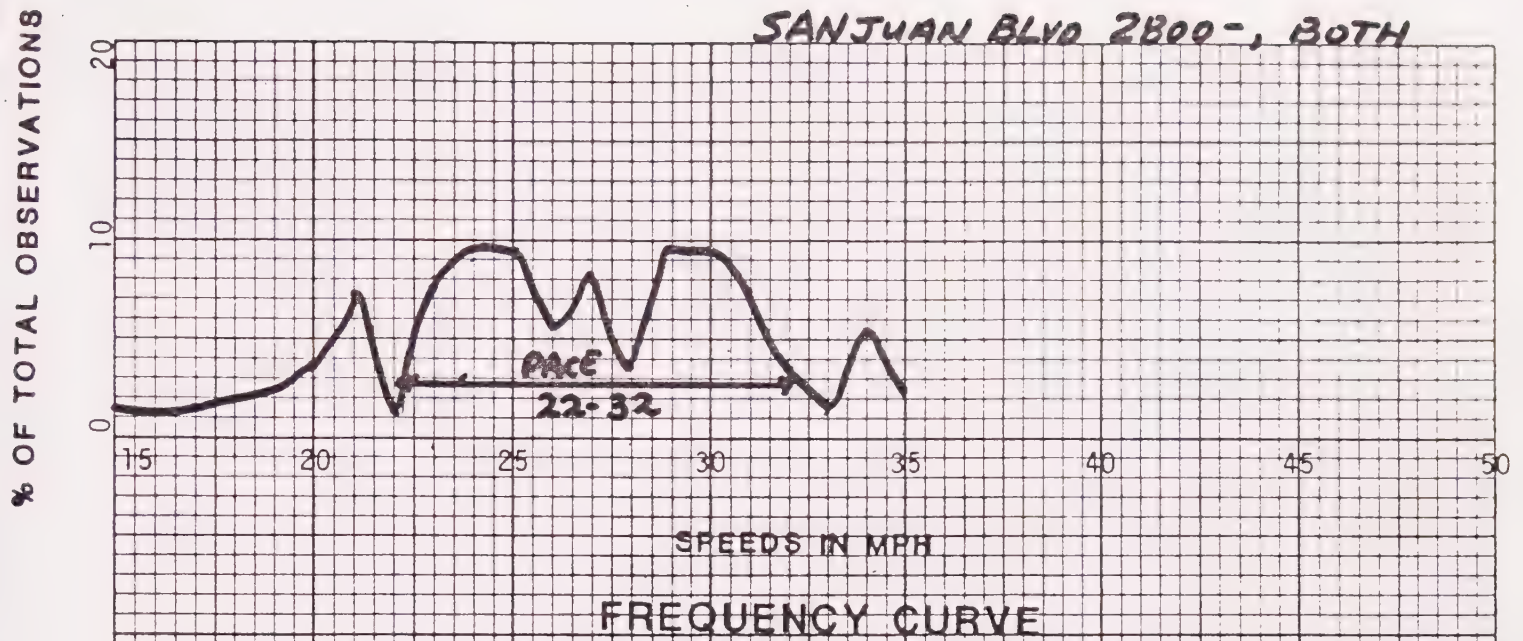
SPEED	NUMBER OF VEHICLES										TOTAL NO.	PERCENT	ACCUM PERCENT
	0	5	10	15	20	25	30	35	40	45			
49													
48													
47													
46													
45													
44													
43													
42													
41													
40													
39													
38													
37													
36													
35	XX										2	2.38	100.00
34	XXXXXX										5	5.95	94.05
33	XXXXXX										1	1.19	92.86
32	XXXX										3	3.57	89.29
31	XXXXXX										6	7.14	82.15
30	XXXXXXXXXX										8	9.52	72.63
29	XXXXXXXXXX										8	9.52	63.11
28	XXXX										3	3.57	59.54
27	XXXXXX										7	8.33	51.21
26	XXXXXX										5	5.95	45.26
25	XXXXXXXXXX										8	9.52	35.74
24	XXXXXXXXXX										8	9.52	26.22
23	XXXXXX										6	7.14	19.08
22	XXXX										1	1.19	17.89
21	XXXXXX										6	7.14	10.75
20	XXXX										3	3.57	7.18
19	XX										2	2.38	4.80
18													
17	X										1	1.19	3.61
16													
15	X										1	1.19	2.42

84

REMARKS

1. ACCIDENT RATE = 8.56 MVM
2. ADT = 1,000
3. UPGRADE/DOWNGRADE WITH LIMITED SIGHT DISTANCES
4. RESIDENTIAL

SAN JUAN BLVD 2800-, BOTH



BELMONT SPOT SPEED ANALYSIS

LOCATION SHOREWAY ROAD, WITHIN CITY LIMITS

DIRECTION BOTH

DATE APRIL 28, 1982

DAY WEDNESDAY

TIME 1530-1545

POSTED SPEED LIMIT 35

STREET WIDTH 22'

OBSERVER J. Snodgrass / N. BRICHACEK

50TH PERCENTILE SPEED 31

85TH PERCENTILE SPEED 36

10 MPH PACE SPEED 25-35

PERCENT IN PACE SPEED 53.06

RANGE OF SPEEDS 15-44

SKEWNESS INDEX 0.78

ANALYSIS BY N. BRICHACEK

SPEED	NUMBER OF VEHICLES										TOTAL NO.	PERCENT	ACCUM PERCENT
	0	5	10	15	20	25	30	35	40	45			
49													
48													
47													
46													
45													
44	X										1	2.04	100.00
43	X										1	2.04	97.96
42													
41	X										1	2.04	95.92
40	X										1	2.04	93.88
39	X	X									2	4.08	89.80
38	X										1	2.04	87.76
37													
36	X										1	2.04	85.72
35													
34	X	X									2	4.08	81.64
33	X										1	2.04	79.60
32	X	X	X	X							6	12.24	67.36
31	X	X	X	X	X						8	16.33	51.03
30	X	X									2	4.08	46.95
29	X	X									2	4.08	42.87
28													
27													
26	X	X	X	X							4	8.16	34.71
25	X										1	2.04	32.67
24	X										1	2.04	30.63
23	X	X	X	X							4	8.16	22.47
22													
21	X	X									2	4.08	18.39
20	X										1	2.04	16.35
19													
18	X	X	X								3	6.12	10.23
17	X										1	2.04	8.19
16	X	X									2	4.08	4.11
15	X										1	2.04	2.07

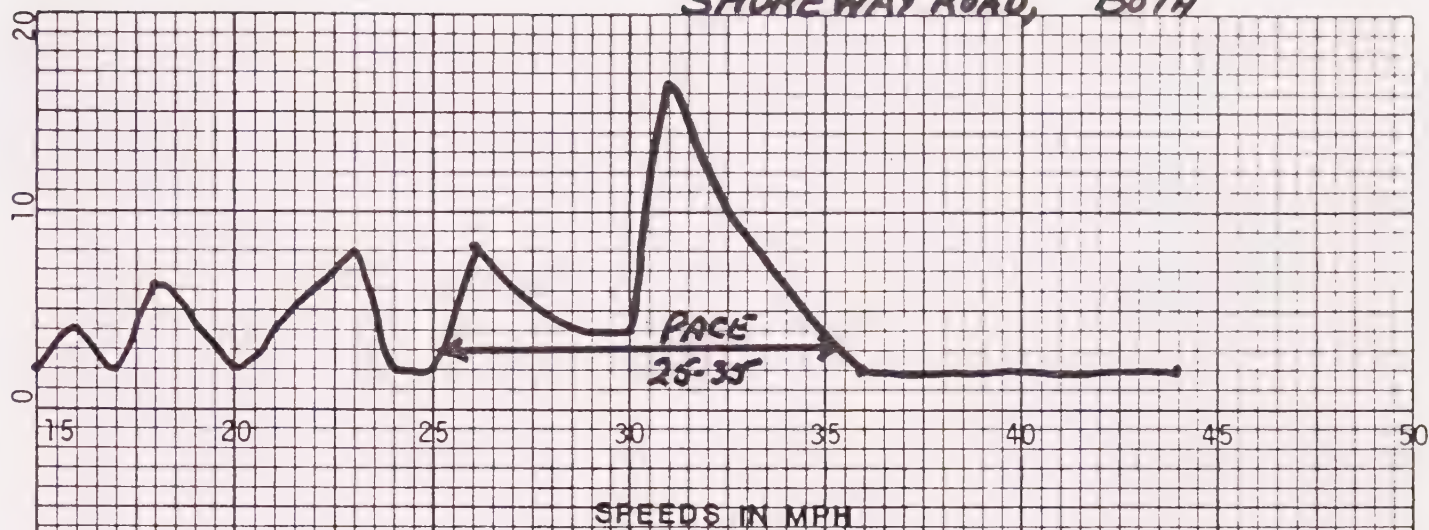
REMARKS

49

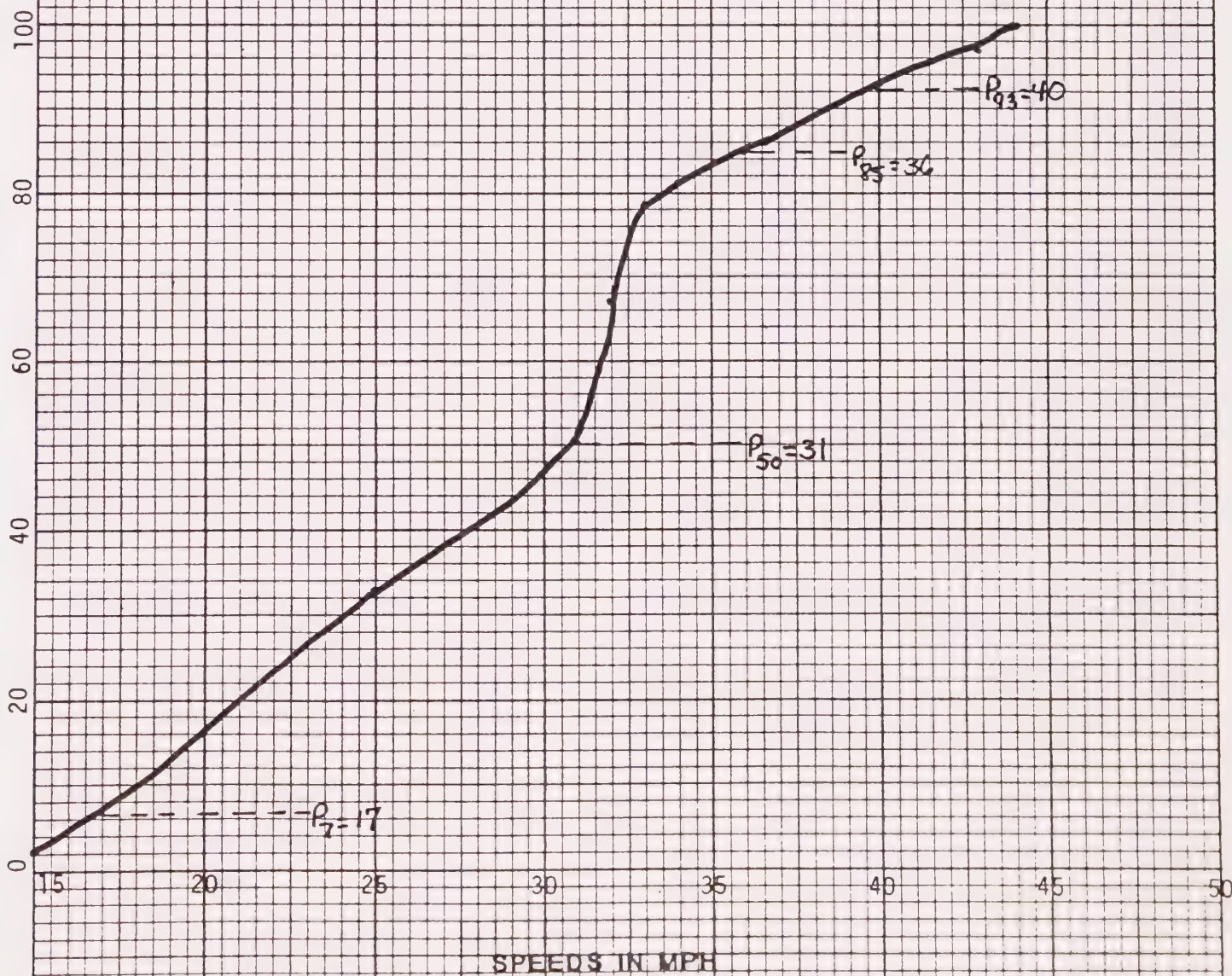
1. ACCIDENT RATE = 2.75/YR
2. WINDING WITH GOOD SIGHT DISTANCES
3. BUSINESS WITH HOLIDAY INN ON CURVE

% OF TOTAL OBSERVATIONS

SHOREWAY ROAD, BOTH



COMMULATIVE PERCENTAGE



BELMONT SPOT SPEED ANALYSIS

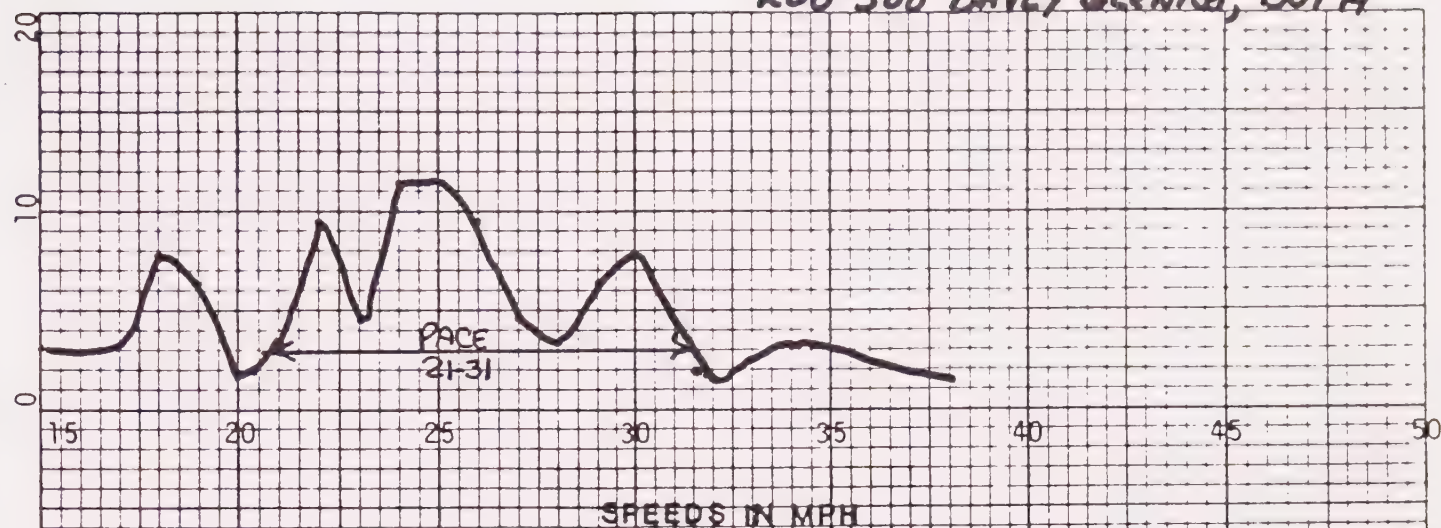
LOCATION 200-500 DAVEY GLEN Rd
 DIRECTION BOTH 50TH PERCENTILE SPEED 25
 DATE APRIL 28, 1982 85TH PERCENTILE SPEED 30
 DAY WEDNESDAY 10 MPH PACE SPEED 21-31
 TIME 1320-1420 PERCENT IN PACE SPEED 82.54
 POSTED SPEED LIMIT 25 RANGE OF SPEEDS 15-38
 STREET WIDTH 38' SKEWNESS INDEX 1.00
 OBSERVER J. Snodgrass / N. BRICHACEK ANALYSIS BY N. BRICHACEK

SPEED	NUMBER OF VEHICLES										TOTAL NO.	PERCENT	ACCUM PERCENT
	0	5	10	15	20	25	30	35	40	45			
39													
38													
37													
36													
35													
34													
33													
32													
31													
30	X										1	1.59	100.00
29													
28													
27													
26													
25													
24													
23													
22													
21													
20													
19													
18													
17													
16													
15													
REMARKS											63		

1. ACCIDENT RATE = 79.09
2. ADT = 1,600
3. UPGRADE/DOWNGRADE
4. RESIDENTIAL

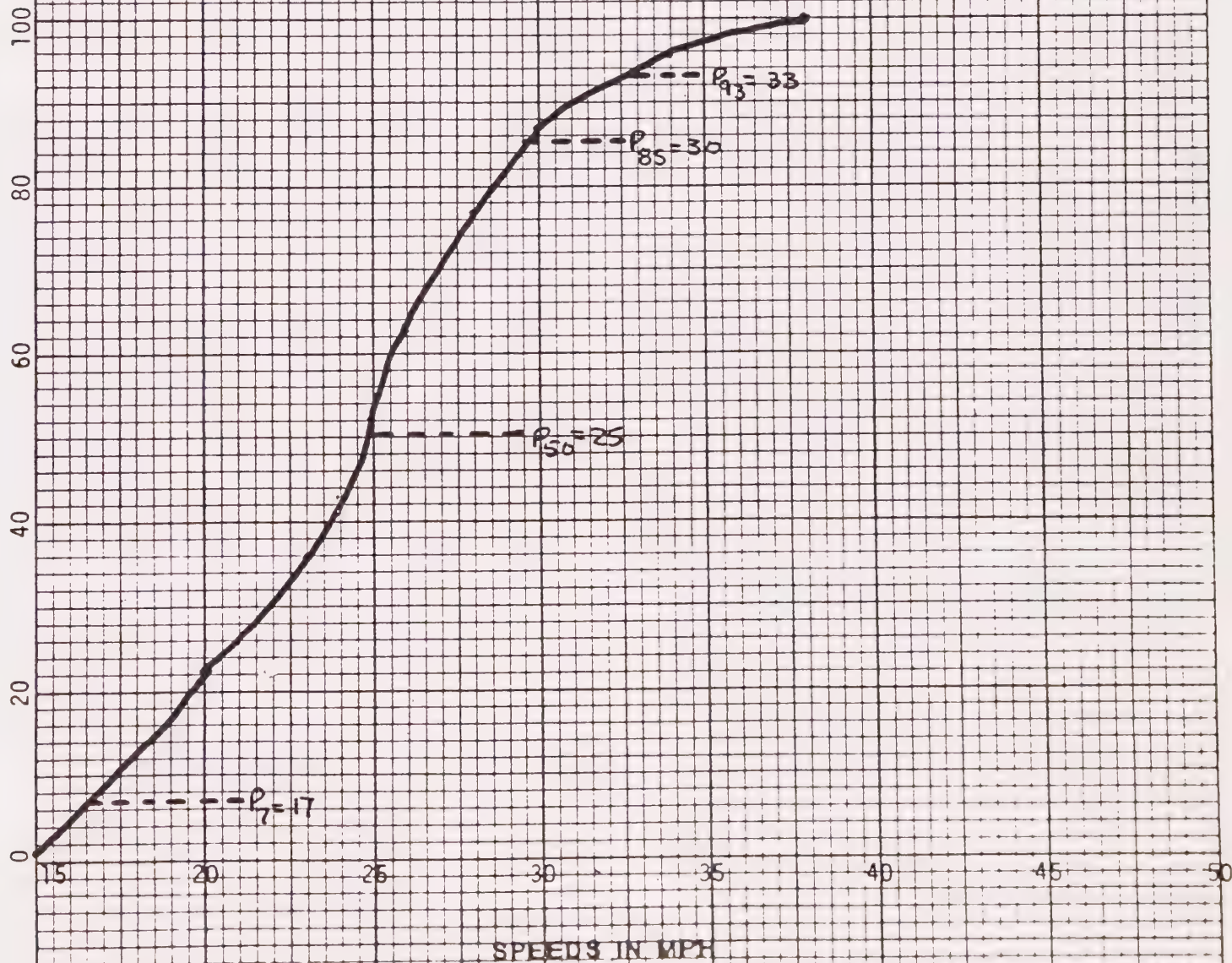
200-500 DAVEY GLEN Rd, BOTH

% OF TOTAL OBSERVATIONS



FREQUENCY CURVE

COMMULATIVE PERCENTAGE



CUMULATIVE FREQUENCY CURVE

BELMONT SPOT SPEED ANALYSIS

LOCATION 2100-2500 CARLMONT DRIVE

DIRECTION BOTH

DATE APRIL 28, 1982

DAY WEDNESDAY

TIME 1130-1215

POSTED SPEED LIMIT 25

STREET WIDTH 33'

OBSERVER J. S. Nodgrass / N. BRICHACEK

50TH PERCENTILE SPEED 27

85TH PERCENTILE SPEED 34

10 MPH PACE SPEED 23-33

PERCENT IN PACE SPEED 66.67

RANGE OF SPEEDS 15-42

SKEWNESS INDEX 1.12

ANALYSIS BY N. BRICHACEK

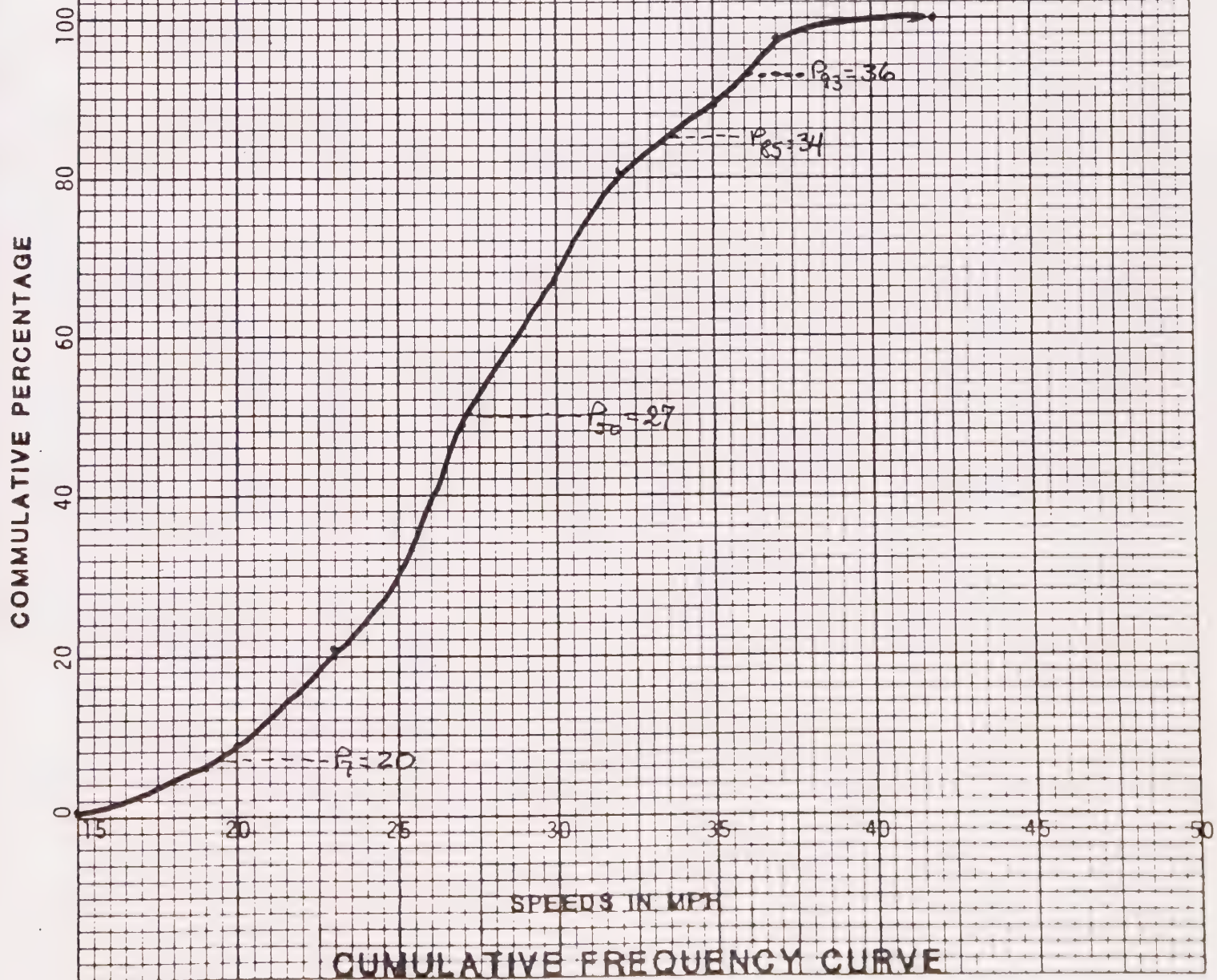
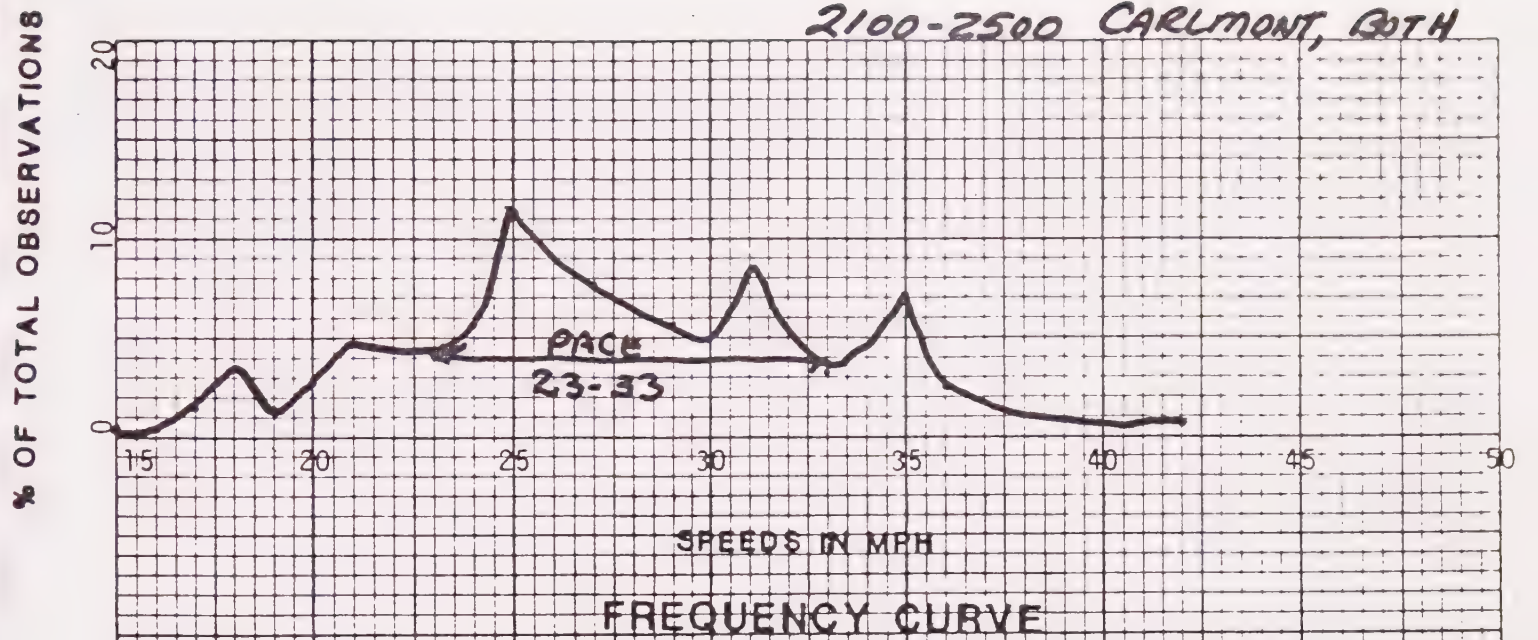
SPEED	0	5	10	15	20	25	30	35	40	TOTL NO	PER CENT	ACCUM PERCENT
49												
48												
47												
46												
45												
44												
43												
42	X									1	0.71	100.00
41	X									1	0.71	99.29
40												
39												
38												
37	X									1	0.71	98.58
36	X	X								3	2.13	96.45
35	X	X	X	X	X	X				10	7.09	89.36
34	X	X	X	X	X	X				3	2.13	87.23
33	X	X	X	X	X	X				5	3.55	83.68
32	X	X	X	X	X	X				4	2.84	80.84
31	X	X	X	X	X	X				12	8.51	72.33
30	X	X	X	X	X	X				7	4.96	67.37
29	X	X	X	X	X	X				8	5.67	61.70
28	X	X	X	X	X	X				7	4.96	56.74
27	X	X	X	X	X	X				11	7.80	48.94
26	X	X	X	X	X	X				10	7.09	41.85
25	X	X	X	X	X	X	X	X	X	16	11.35	30.50
24	X	X	X	X	X	X				8	5.67	24.83
23	X	X	X	X	X	X				6	4.26	20.57
22	X	X	X	X	X	X				6	4.26	16.31
21	X	X	X	X	X	X				7	4.96	11.35
20	X	X	X	X	X	X				4	2.84	8.51
19	X	X	X	X	X	X				2	1.42	7.09
18	X	X	X	X	X	X				5	3.55	3.54
17	X	X	X	X	X	X				2	1.42	2.12
16	X	X	X	X	X	X				1	0.71	1.41
15	X	X	X	X	X	X				1	0.71	0.70

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REMARKS

1. ACCIDENT RATE = 10.31 MVM
2. ADT = 3,800
3. UPGRADE FROM ALAMEDA TO HASTINGS WITH LIMITED SIGHT DISTANCES ON CURVES
4. BUSINESS AND RESIDENTIAL

2100-2500 CARLMONT, BOTH



BELMONT SPOT SPEED ANALYSIS

LOCATION LYALL WAY, CONTINETALS to RALSTON
 DIRECTION BOTH 50TH PERCENTILE SPEED 27
 DATE APRIL 28, 1982 85TH PERCENTILE SPEED 32
 DAY WEDNESDAY 10 MPH PACE SPEED 23-33
 TIME 1215-1315 PERCENT IN PACE SPEED 81.44
 POSTED SPEED LIMIT 25 RANGE OF SPEEDS 19-43
 STREET WIDTH 32' SKEWNESS INDEX 1.08
 OBSERVER J. Snodgrass / N. BRICHACEK ANALYSIS BY N. BRICHACEK

SPEED	NUMBER OF VEHICLES										TOTAL NO.	PERCENT	ACCUM PERCENT
49													
48													
47													
46													
45													
44													
43	X										1	1.03	100.00
42													
41													
40													
39													
38													
37	X										1	1.03	98.97
36													
35	X	X									2	2.06	96.91
34	X	X									1	1.03	95.88
33	X	X									2	2.06	93.82
32	X	X	X	X	X	X					7	7.22	86.60
31	X	X	X	X	X	X					7	7.22	79.38
30	X	X	X	X	X	X					6	6.19	73.19
29	X	X	X	X	X	X					5	5.15	68.04
28	X	X	X	X	X	X					5	5.15	62.89
27	X	X	X	X	X	X	X				9	9.28	53.61
26	X	X	X	X	X	X	X	X	X		13	13.40	40.21
25	X	X	X	X	X	X	X	X	X		14	14.30	25.91
24	X	X	X	X	X	X	X				7	7.22	18.69
23	X	X	X	X							4	4.12	14.57
22	X	X	X								3	3.09	11.48
21	X	X	X								4	4.12	7.36
20	X	X									2	2.06	5.30
19	X	X	X								4	4.12	1.18
18													
17													
16													
15													

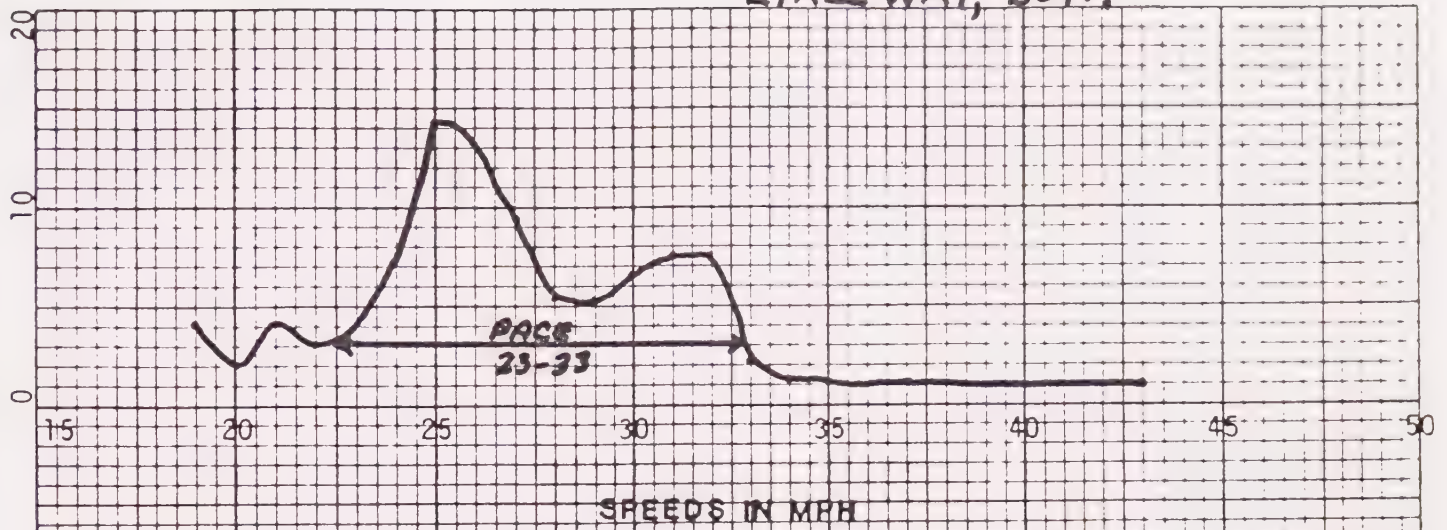
REMARKS

97

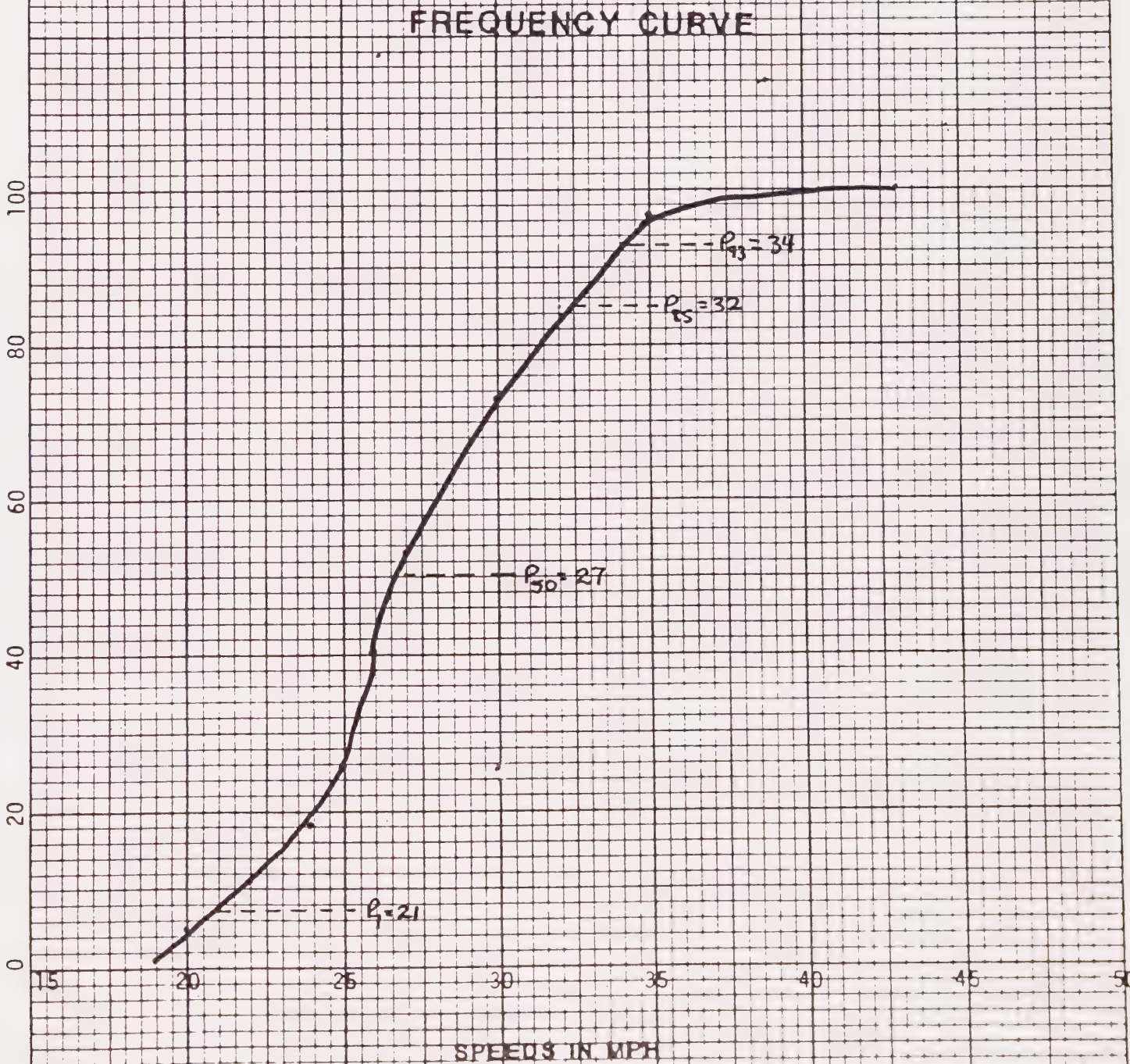
1. ACCIDENT RATE = 6.00/YR
2. UPGRADE/DOWNGRADE
3. RESIDENTIAL WITH SCHOOL (MERRY MOPPET)

LYALL WAY, BOTH

% OF TOTAL OBSERVATIONS



COMMULATIVE PERCENTAGE



BELMONT SPOT SPEED ANALYSIS

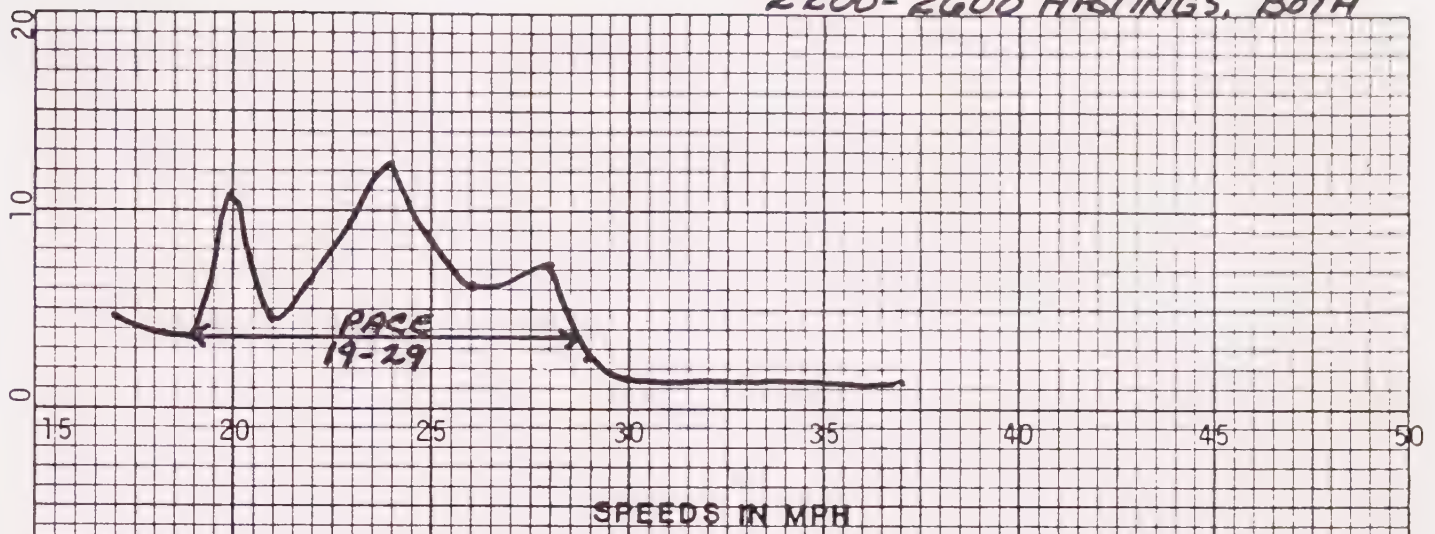
LOCATION 2200-2600 HASTINGS DRIVE
 DIRECTION BOTH 50TH PERCENTILE SPEED 24
 DATE APRIL 29, 1982 85TH PERCENTILE SPEED 29
 DAY Thursday 10 MPH PACE SPEED 19-29
 TIME 1220-1335 PERCENT IN PACE SPEED 79.27
 POSTED SPEED LIMIT 25 RANGE OF SPEEDS 17-37
 STREET WIDTH 34' SKEWNESS INDEX 1.17
 OBSERVER J. SNOOK/ N. BIZICHACEK ANALYSIS BY N. BIZICHACEK

VEHICLE SPEED	NUMBER OF VEHICLES	TOTAL NO.	PERCENT	ACCUM PERCENT
9				
8				
7				
6				
5				
4				
3				
2				
1				
0				
9				
8		1	1.22	100.00
7	X	1	1.22	98.78
6	X			
5				
4		2	2.44	96.34
3	X	2	2.44	93.90
2	X	2	2.44	91.46
1	X	1	1.22	90.24
0	X	2	2.44	87.80
9	X	6	7.32	80.48
8	X	5	6.10	74.38
7	X	5	6.10	68.28
6	X	7	8.54	59.74
5	X	11	13.41	46.33
4	X	8	9.76	36.37
3	X	5	6.10	30.47
2	X	4	4.88	25.59
1	X	9	10.98	14.61
0	X	3	3.66	10.95
9	X	4	4.88	6.07
8	X	4	4.88	1.19
7	X			
6				
5				

82

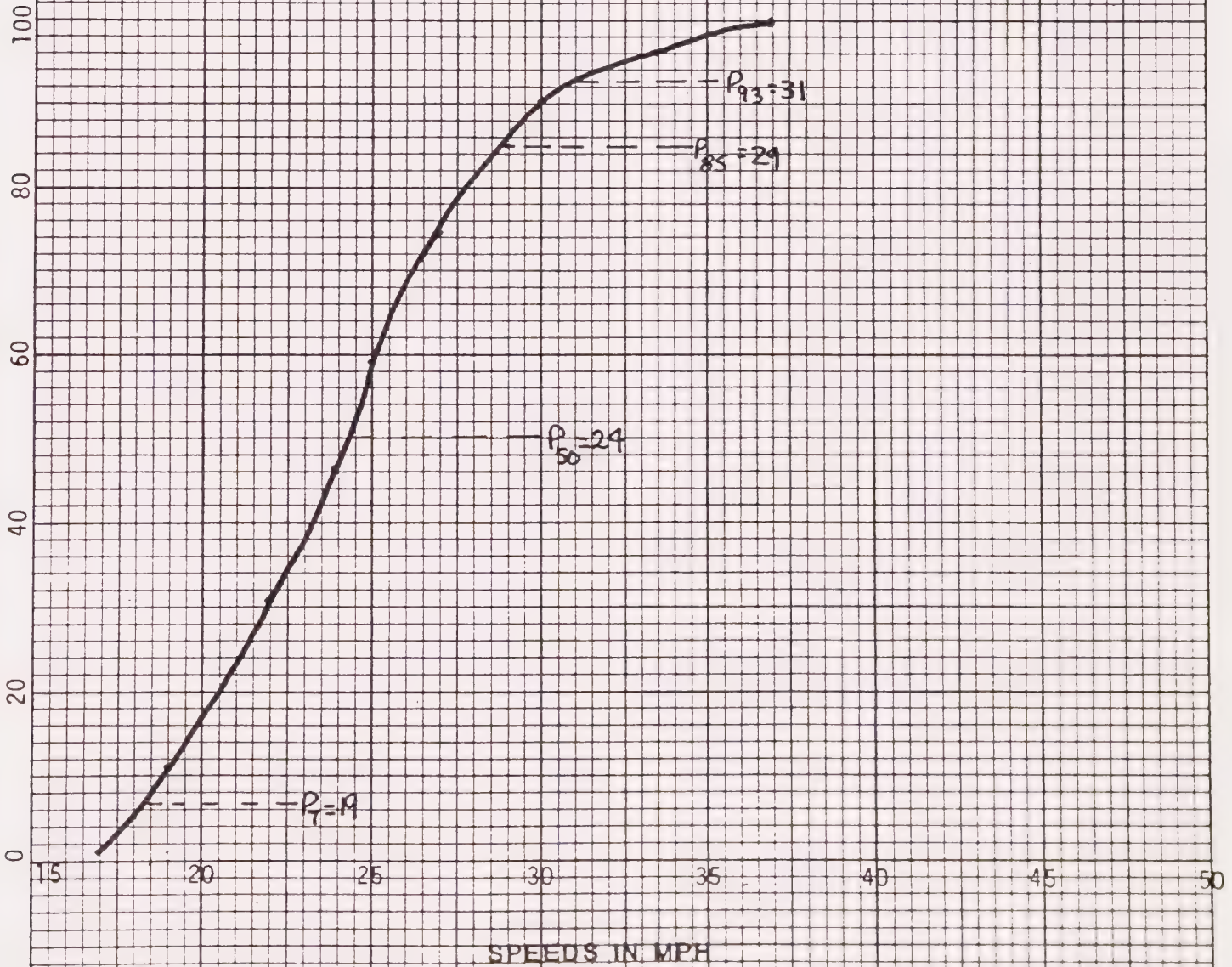
2200-2600 HASTINGS, BOTH

% OF TOTAL OBSERVATIONS



FREQUENCY CURVE

COMMUTATIVE PERCENTAGE



CUMULATIVE FREQUENCY CURVE

APPENDIX II

INVENTORY

OF

ROAD CONDITIONS

RALSTON AVENUE 100-3000 BLOCK

DIRECTION:

East and West bound

TRAFFIC LANES:

East City Limits to 500 Block: Four (4) lanes; two (2) East bound, two (2) West bound. Opposing lanes separated by solid island. Width: approximately 13 feet per lane.

500-800 Block: Four (4) lanes; two (2) East bound, two (2) West bound. Opposing lanes separated by raised pavement markers. Width: approximately 14 feet per lane.

800-1000 Block: Five lanes; two (2) East bound, two (2) West bound, one (1) marked and designated two way left turn lane. Opposing lanes separated by raised pavement markers. Width: approximately 14 feet per lane.

1000-1300 Block: Four (4) lanes; two (2) East bound, two (2) West bound. Opposing lanes separated by raised pavement markers. Width: approximately 14 feet per lane.

1000-1900 Block: Three (3) lanes; one (1) East bound, one (1) West bound, one (1) marked and designated two way left turn lane. Width: approximately 14 feet per traffic lanes and approximately 10 feet for left turn lanes. Opposing lanes separated by raised pavement markers.

1900-2100 Block: Three (3) lanes; one (1) East bound, two (2) West bound. Opposing lanes separated by solid islands. Width: approximately 13 feet per lane.

2100-2400 Block: Four (4) lanes; two (2) East bound, two (2) West bound. Opposing lanes separated by a double-double line consisting of paint and raised pavement markers. Width: approximately 13 feet per lane.

2400-2600 Block: Four (4) lanes; two (2) East bound, two (2) West bound. Opposing lanes separated by a double-double line consisting of paint and raised pavement markers. Width: approximately 12 feet per lane.

2600-3000 Block: Four lanes; two (2) East bound, two (2) West bound. Opposing lanes separated by solid island. Width: approximately 12 feet per lane.

TOPOGRAPHY

- EAST CITY LIMITS - upgrade and downgrade. Freeway on and off ramps.
- HILLER STREET - controlled intersection: traffic signals. Storage lanes: left turn; East and West bound.
- GRANADA STREET - controlled intersection: two (2) way stop; North and South bound.
- FURLONG STREET - controlled intersection: one (1) stop sign North bound.
- ELMER STREET - controlled intersection: one (1) stop sign North bound.
- OLD COUNTY ROAD - controlled intersection: traffic signals. Storage lanes - left turn; East and West bound, and right turn; West bound.
- SOUTHERN PACIFIC RIGHT-OF-WAY - railroad crossing; controlled by Audible and Electronic signal device.
- EL CAMINO REAL - main arterial: controlled intersection; traffic signals. Storage lanes - left turn; East and West bound, and right turn; West bound.
- SIXTH AVENUE - controlled intersection: traffic signals. Storage lanes - left turn; East and West bound, right turn; East bound. Roadway curves to left; sight distance acceptable. Left turn storage lane for City complex. Roadway curves to right; sight distance acceptable.
- SOUTH ROAD - controlled intersection: three (3) way stop; East, South and West bound. Roadway curves to right; sight distance acceptable.
- Entrance to College of Notre Dame - controlled by one (1) stop sign South bound. "S" curves; sight distance acceptable.
- CHULA VISTA DRIVE - controlled intersection: one (1) stop sign North bound. Storage lane - left turn; West bound.
- Two (2) entrances to Notre Dame High School - storage lanes; left turn, East bound.
- NOTRE DAME AVENUE - controlled intersection: one (1) stop sign South bound. Storage lane - left turn, East bound.
- CHEVY STREET - controlled intersection: one (1) stop sign South bound. Storage lane - left turn, East bound.
- AVON STREET - controlled intersection: one (1) stop sign South bound. Storage lane - left turn, East bound.

TOPOGRAPHY, cont.

- MAYWOOD DRIVE - controlled intersection: one (1) stop sign North bound. Storage lane - left turn, West bound.
- ACADEMY AVENUE - controlled intersection: one (1) stop sign South bound. One (1) marked pedestrian crossway.
- VILLA AVENUE - controlled intersection: one (1) stop sign South bound. Between ACADEMY AVENUE and ALAMEDA DE LAS PULGAS is located Carlmont Shopping Center.
- ALAMEDA DE LAS PULGAS - Main arterial: controlled intersection; traffic signals. Storage lanes - left turn, East and West bound.
- CORONET BOULEVARD - controlled intersection: one (1) stop sign South bound.
- PULLMAN AVENUE AND LYALL WAY - controlled intersection: two way stop North and South bound. Storage lanes - left turn, West bound. One (1) marked pedestrian crossway. "S" curve; sight distance limited.
- CIPRIANI BOULEVARD AND CONTINENTALS WAY - controlled intersection: traffic signals. Storage lanes - left turn, East and West bound. "S" curve; sight distance limited.
- BELMONT CANYON ROAD - controlled intersection: "Right turn only"; one (1) stop sign South bound.
- DAVIS DRIVE - controlled intersection: traffic signals. Storage lane - left turn, West bound. DAVIS DRIVE is the entrance to a Business Complex.
- Two (2) entrances to Ralston School - storage lanes; left turn West bound.
- TAHOE DRIVE - controlled intersection: one (1) stop sign North bound. Storage lane; left turn, West bound.
- BELMONT CANYON ROAD - controlled intersection: traffic signals. Storage lane - left turn, East bound.
- LASSEN DRIVE - controlled intersection: one (1) stop sign North bound. Storage lane; left turn, West bound.
- HALLMARK DRIVE - controlled intersection: traffic signals. Storage lane - left turn, West bound.

TOPOGRAPHY, cont.

BELMONT CANYON ROAD - controlled intersection: one (1) stop sign
South bound. Vista Point on North side of
street. "S" curve; sight distance acceptable.

CHRISTIAN DRIVE - controlled intersection: traffic signals.
Storage lane - left turn, East bound.

RALSTON AVENUE is an upgrade from ALAMEDA DE LAS PULGAS to Ralston
Intermediate School.

RALSTON AVENUE is a downgrade from HALLMARK DRIVE to CHRISTIAN DRIVE.

DEVELOPMENT:

EAST CITY LIMITS to OLD COUNTY ROAD: Residential, business and
residential structures, meaning apartment buildings.

OLD COUNTY ROAD to SOUTH ROAD: Business and residential structures.

SOUTH ROAD to MAYWOOD DRIVE: Residential.

MAYWOOD to PULLMAN AVENUE: Business.

PULLMAN AVENUE to CHRISTIAN DRIVE: Residential.

Pedestrian Right-of-Way:

EAST CITY LIMITS to LYALL WAY - both sides of street.

LYALL WAY to BELMONT CANYON ROAD (second crossing) - South side
of street.

BELMONT CANYON ROAD to CHRISTIAN DRIVE - both sides of street.

Bicycle lane extends from SOUTH ROAD to MAYWOOD DRIVE on both sides
of street.

MIDDLE ROAD 300-700 BLOCK

DIRECTION:

Both

TRAFFIC LANES:

Two (2) lanes

Opposing lanes separated by raised pavement markers

Width: approximately 24 feet

TOPOGRAPHY:

NOTRE DAME AVENUE - controlled intersection: one (1) stop sign
West bound.

WILLOW LANE - controlled intersection: one (1) stop sign North
bound.

SOUTH ROAD - controlled intersection: one (1) stop sign North
bound. "S" curve; sight distance limited.

DAVEY GLEN - controlled intersection: one (1) stop sign South
bound.

CAMINO VISTA COURT - one (1) marked pedestrian crossway.

HAINLINE DRIVE - controlled intersection: one (1) stop sign North
bound. "S" curve; sight distance limited.

BARBARA LANE - one (1) marked pedestrian crossway. Roadway curves
to right; sight distance acceptable.

VIRGINIA AVENUE - controlled intersection: four (4) way stop.
VIRGINIA AVENUE is the entrance to Central School.

LAUREL COURT - roadway curves to right; sight distance limited.

CYPRESS AVENUE - controlled intersection: one (1) stop sign East
bound.

EL CAMINO REAL - controlled intersection: one (1) stop sign East
bound.

MIDDLE ROAD is a downgrade from SOUTH ROAD to EL CAMINO REAL.

DEVELOPMENT:

Residential and residential structures; meaning apartment buildings.

OLD COUNTY ROAD 100-1300 BLOCK

DIRECTION:

North and South bound

TRAFFIC LANES:

Two (2) lanes separated by raised pavement markers
Width: approximately 30 feet

TOPOGRAPHY:

STERLING VIEW AVENUE - controlled intersection: one (1) stop sign West bound.

DALE VIEW AVENUE - controlled intersection: one (1) stop sign West bound.

CREST VIEW AVENUE - controlled intersection: one (1) stop sign West bound.

MOUNTAIN VIEW AVENUE - controlled intersection: one (1) stop sign West bound.

MARINE VIEW AVENUE - controlled intersection: three (3) way stop; North, South and West bound.

MASONIC WAY - controlled intersection: one (1) stop sign West bound.

RALSTON AVENUE - main arterial: controlled intersection; traffic signals. Storage lanes: left turn - North bound, right turn - South bound.

WALTERMIRE STREET - controlled intersection: one (1) stop sign West bound.

O'NEILL AVENUE - uncontrolled intersection; sight distance acceptable.

HARBOR BOULEVARD - controlled intersection; traffic signals. Storage lanes: right turn - South bound.

DEVELOPMENT:

North of RALSTON AVENUE: Business and residential structures, meaning apartment buildings.

South of RALSTON AVENUE: Residential and business.

ALAMEDA DE LAS PULGAS 100-1200 BLOCK

DIRECTION:

North and South bound

TRAFFIC LANES:

FOREST AVENUE to RALSTON AVENUE: two (2) lanes separated by raised pavement markers.

RALSTON AVENUE to CARLMONT DRIVE: four (4) lanes separated by raised pavement markers and paint.

CARLMONT DRIVE to SOUTH CITY LIMITS: three (3) lanes; two (2) North bound, one (1) South bound. Separated by raised pavement markers and paint.

Width: approximately 18 feet

TOPOGRAPHY:

FOREST AVENUE - controlled intersection: one (1) stop sign West bound.

CIPRIANI BOULEVARD - controlled intersection: one(1) stop sign East bound.

MONROE AVENUE - controlled intersection: four (4) way stop. Downgrade; sight distance limited.

LYONS AVENUE - controlled intersection: two (2) way stop, East and West bound. Roadway curves to right; sight distance acceptable.

NOTRE DAME AVENUE - controlled intersection: one (1) stop sign West bound.

CORONET BOULEVARD - controlled intersection: four (4) way stop. Roadway curves to right; sight distance acceptable.

BELLE MONTI AVENUE - controlled intersection: one (1) stop sign West bound.

SHARON AVENUE - controlled intersection: one (1) stop sign East bound.

MEZES AVENUE - controlled intersection: three (3) way stop; North, South and West bound.

ARBOR AVENUE - controlled intersection: three way stop; North, South and West bound. Upgrade; roadway curves to right, sight distance limited.

COVINGTON ROAD - controlled intersection: one (1) stop sign East bound. Downgrade; roadway curves to right, sight distance limited.

ALAMEDA DE LAS PULGAS 100-1200 BLOCK, cont.

ARTHUR AVENUE - controlled intersection: one (1) stop sign East bound.

ALDEN STREET - controlled intersection: three (3) way stop; North, South and West bound. Steep downgrade; sight distance limited.

COVINGTON ROAD - controlled intersection: one (1) stop sign East bound.

RALSTON AVENUE - main arterial: controlled intersection; traffic signals. Traffic lanes characteristic change: four (4) lanes; two (2) North bound, two (2) South bound.

Between RALSTON AVENUE and CARLMONT DRIVE is Carlmont Shopping Center.

CARLMONT DRIVE - controlled intersection: three (3) way stop; North, East and South bound. Roadway curves to left; sight distance acceptable.

Between CARLMONT DRIVE and GARDEN COURT is the Belmont Branch of the San Mateo County Library and Belameda Park.

GARDEN COURT - controlled intersection: one (1) stop sign East bound.

VALERGA DRIVE - controlled intersection: one (1) stop sign East bound.

EL VERANO WAY - controlled intersection: four (4) way stop.

CHULA VISTA DRIVE - controlled intersection: four (4) way stop.

EL VERANO WAY and CHULA VISTA DRIVE are both entrances to Carlmont High School.

DEVELOPMENT:

FOREST AVENUE to RALSTON AVENUE: Residential.

RALSTON AVENUE to CARLMONT DRIVE: Business.

CARLMONT DRIVE to SOUTH CITY LIMITS: Residential and residential structures; meaning apartment buildings.

Pedestrian right-of-way on both sides of street from CIPRIANI BOULEVARD to SOUTH CITY LIMITS.

HALLMARK DRIVE 2400-2900 BLOCK

DIRECTION:

North and South

TRAFFIC LANES:

Two (2) lanes

Width: 2400-2700 block approximately 37 feet

2700-2900 block approximately 48 feet

TOPOGRAPHY:

BARRICADE

Roadway is separated by banked island; South bound traffic has up and down grade, North bound lane is level. Roadway (both North and South bound) curves to left; sight distance limited.

LEIGH WAY - "S" curve; downgrade, sight distance limited.

WAKEFIELD DRIVE - uncontrolled intersection; sight distance acceptable.

PADDINGTON COURT - roadway curves to right; downgrade, sight distance acceptable.

SOHO CIRCLE - uncontrolled intersection; sight distance acceptable.

WATERLOO COURT - roadway curves right; downgrade, sight distance acceptable.

COMSTOCK CIRCLE - controlled intersection: four (4) way stop. Roadway curves to left, sight distance acceptable. Roadway curves to right; downgrade, sight distance limited.

WEMBERLY DRIVE - controlled intersection: four (4) way stop. Roadway curves to left, sight distance acceptable.

COMSTOCK CIRCLE - roadway curves to right, sight distance acceptable.

LAKE ROAD - upgrade.

BENSON WAY - controlled intersection: one (1) stop sign East bound. Upgrade. BENSON WAY is the access road to Fox School.

RALSTON AVENUE - major arterial: controlled intersection traffic signals. Storage lane: left turn North bound.

DEVELOPMENT:

Residential. Pedestrian right-of-way on both sides of street from BARRICADE to RALSTON AVENUE.

ELMER STREET 1000-1200 BLOCK

DIRECTION:

North and South bound

TRAFFIC LANES:

Two (2) lanes

Width: approximately 25 feet

TOPOGRAPHY:

RALSTON AVENUE - controlled intersection: one (1) stop sign
North bound.

WALTERMIRE - uncontrolled intersection; sight distance acceptable.

O'NEILL AVENUE - controlled intersection: four (4) way stop.

DEVELOPMENT:

East side: residential.

West side: business, residential structures; meaning apartment
buildings, and residential.

CIPRIANI BOULEVARD 2100-2600 BLOCK

DIRECTION:

North and South

TRAFFIC LANES:

Two (2) lanes

Width: approximately 23 feet

TOPOGRAPHY:

ALAMEDA DE LAS PULGAS - controlled intersection: four (4) way stop. Upgrade. Roadway turns to right; sight distance limited. Roadway turns to right; sight distance limited.

SEMERIA AVENUE - controlled intersection: one (1) stop sign North bound.

FOREST AVENUE - controlled intersection: one (1) stop sign South bound. Roadway turns to left; sight distance limited.

WOOSTER AVENUE - controlled intersection: three (3) way stop; North, East and South bound. Roadway turns to left; sight distance limited.

BUENA VISTA AVENUE - controlled intersection: one (1) stop sign West bound. Roadway turns to right; sight distance limited.

NEWLANDS AVENUE - controlled intersection: four (4) way stop.

LINCOLN AVENUE - controlled intersection: one (1) stop sign East bound. Roadway turns to left; sight distance limited.

BUENA VISTA AVENUE - controlled intersection: four (4) way stop. BUENA VISTA AVENUE is the entrance to Cipriani School. Roadway curves to right; sight distance limited. Roadway curves to left; sight distance acceptable.

CARMELITA AVENUE - controlled intersection: two (2) way stop; East and West bound. One marked pedestrian crossway. Roadway curves to right; sight distance acceptable.

PONCE AVENUE - controlled intersection: four (4) way stop. Roadway curves to left; sight distance acceptable.

MONSERAT AVENUE - controlled intersection: one (1) stop sign East bound.

SAN JUAN BOULEVARD - controlled intersection: one (1) stop sign East bound.

CIPRIANI BOULEVARD 2100-2600 BLOCK, cont.

PRINDLE ROAD - controlled intersection: one (1) stop sign West bound.

RALSTON AVENUE - main arterial: controlled intersection; traffic
signals. Storage lane: left turn South bound.

DEVELOPMENT:
Residential.

RUTH AVENUE 800-900 BLOCK

DIRECTION:

East and West bound

TRAFFIC LANES:

Two (2) lanes

Width: approximately 23 feet

TOPOGRAPHY:

EL CAMINO REAL - controlled intersection: one (1) stop sign East bound.

MALCOLM AVENUE - controlled intersection: two (2) way stop North and South bound. Roadway curves to left; sight distance acceptable.

NORTH ROAD - controlled intersection: one (1) stop sign South bound.

RUTH AVENUE is an upgrade from EL CAMINO REAL to NORTH ROAD.

DEVELOPMENT:

Residential.

EL VERANO WAY 1800-1900 BLOCK

DIRECTION:

East and West bound

TRAFFIC LANES:

Two (2) lanes

Width: approximately 25 feet

TOPOGRAPHY:

FERNWOOD WAY - controlled intersection: one (1) stop sign East bound.

ALOMAR WAY - roadway curves to right; sight distance limited.

LADERA WAY and VALDEZ AVENUE - controlled intersection: two (2) way stop North and South bound.

VALDEZ AVENUE - roadway curves to left; sight distance acceptable.

ALAMEDA DE LAS PULGAS - controlled intersection: four (4) way stop.

EL VERANO WAY is a downgrade from ALOMAR WAY to ALAMEDA DE LAS PULGAS.

DEVELOPMENT:

Residential.

SOUTH ROAD 300-900 BLOCK

DIRECTION:

North and South bound

TRAFFIC LANES:

Two (2) lanes

Opposing lanes separated by raised pavement markers

Width: approximately 20 feet

TOPOGRAPHY:

MIDDLE ROAD - controlled intersection: one (1) stop sign North bound.

DEBBIE LANE - "S" curve, sight distance limited.

HAINLINE DRIVE - roadway curves to right, sight distance acceptable.

KORBEL WAY - uncontrolled intersection; sight distance acceptable.

VANNIER DRIVE - roadway curves to left, sight distance limited.

COLLEGE VIEW WAY - controlled intersection: one (1) stop sign South bound.

VANNIER DRIVE - roadway curves to right, sight distance limited.

SOUTHVIEW COURT - controlled intersection: one (1) stop sign South bound.

MIRAMAR TERRACE - controlled intersection: one (1) stop sign East bound.

HOLLY ROAD - controlled intersection: four (4) way stop. "S" curve, sight distance limited.

HOLLY ROAD - controlled intersection: two (2) way stop; South and West bound.

RALSTON AVENUE - main arterial: controlled intersection; three (3) way stop, East, South and West bound.

SOUTH ROAD is a downgrade from VANNIER DRIVE to RALSTON AVENUE.

DEVELOPMENT:

Residential.

CHULA VISTA DRIVE 1000-1900 BLOCK

DIRECTION:

East and West bound

TRAFFIC LANES:

Two (2) lanes

Width: approximately 25 feet

RALSTON AVENUE to ESCONDIDO WAY: opposing traffic lanes separated by raised pavement markers.

ESCONDIDO WAY to EL VERANO WAY: opposing traffic lanes separated by painted line.

TOPOGRAPHY:

RALSTON AVENUE - controlled intersection: one (1) stop sign North bound.

ESCONDIDO WAY - controlled intersection: three (3) way stop; North, East and South bound. "S" curve; sight distance limited.

SOLANA DRIVE - controlled intersection: two (2) way stop; North and West bound. SOLANA DRIVE is the entrance to McDougal school.

EL VERANO WAY - controlled intersection: two (2) way stop East and South bound. "S" curve; sight distance limited.

FERNWOOD WAY - controlled intersection: three (3) way stop; East, South and West bound. Roadway curves to right; sight distance limited.

ALAMEDA DE LAS PULGAS - controlled intersection: four (4) way stop.

CHULA VISTA DRIVE is an upgrade from RALSTON AVENUE to EL VERANO WAY. CHULA VISTA DRIVE is a downgrade from FERNWOOD WAY to ALAMEDA DE LAS PULGAS.

DEVELOPMENT:

Residential. Pedestrian right-of-way (sidewalk) on both sides of street from SOLANA DRIVE to ALAMEDA DE LAS PULGAS.

NOTRE DAME AVENUE 900-2000 BLOCK

DIRECTION:

Both

TRAFFIC LANES:

Two (2) lane

Opposing lanes separated by raised pavement markers

Width: approximately 18 feet

TOPOGRAPHY:

RALSTON AVENUE - controlled intersection: one (1) stop sign
South bound.

CLEE STREET - controlled intersection: one (1) stop sign East
bound.

BELBURN DRIVE - controlled intersection: one (1) stop sign East
bound. One marked pedestrian crossway.

FRANCIS AVENUE - controlled intersection: three (3) way stop;
North, East and South bound. FRANCIS AVENUE is
the entrance to Notre Dame Elementary School.

FOLGER DRIVE - controlled intersection: one (1) stop sign South
bound. Roadway curves to left; sight distance
limited.

ARBOR AVENUE - controlled intersection: two (2) way stop; East
and South bound. Roadway curves to right; sight
distance limited.

TERRACE DRIVE - controlled intersection: one (1) stop sign East
bound. "S" curve; sight distance limited.

FOLGER DRIVE - controlled intersection: one (1) stop sign West
bound. Roadway curves to left; sight distance
limited.

MANZANITA AVENUE - controlled intersection: one (1) stop sign East
bound. Roadway curves to left; sight distance
limited.

MIDDLE ROAD - controlled intersection: one (1) stop sign West
bound.

NORTH ROAD - controlled intersection: one (1) stop sign West
bound. "S" curve; sight distance limited.

VALLEY VIEW - controlled intersection: one (1) stop sign East
bound.

RIDGE ROAD - controlled intersection: one (1) stop sign West
bound. Roadway curves to left; sight distance limited

NOTRE DAME AVENUE 900-2000 BLOCK, cont.

WINDING WAY, PINE KNOLL DRIVE AND HILLMAN AVENUE - controlled intersection: six (6) way stop. Roadway curves to right; sight distance limited.

MEZES AVENUE - controlled intersection: four (4) way stop.

BELLE MONTI AVENUE - controlled intersection: one (1) stop sign North bound. Roadway curves to right; sight distance limited.

MILLER AVENUE - controlled intersection: three (3) way stop; East, South and West bound. Roadway curves to right; sight distance limited.

ALAMEDA DE LAS PULGAS - controlled intersection: four (4) way stop.

NOTRE DAME AVENUE is an upgrade from FRANCIS AVENUE to MANZANITA AVENUE and from NORTH ROAD to RIDGE ROAD.

DEVELOPMENT:
Residential.

HILLER STREET 100-1200 BLOCK

DIRECTION:

North and South bound

TRAFFIC LANES:

Two (2) lanes

Width: approximately 37 feet, North of Ralston Avenue
27 feet, South of Ralston Avenue

TOPOGRAPHY:

STERLING VIEW AVENUE - controlled intersection: one (1) stop sign East bound.

DALE VIEW AVENUE - controlled intersection: one (1) stop sign East bound.

CHESTERTON AVENUE - controlled intersection: one (1) stop sign West bound.

CREST VIEW AVENUE - controlled intersection: one (1) stop sign East bound. Roadway curves to left, sight distance acceptable.

SUSSEX COURT - controlled intersection: one (1) stop sign East bound.

MARINE VIEW - controlled intersection: four (4) way stop.

MIDDLESEX ROAD - controlled intersection: one (1) stop sign East bound.

ROXBURY WAY - controlled intersection: one (1) stop sign East bound. Roadway curves to right, sight distance acceptable.

CAMBRIDGE STREET - controlled intersection: two (2) way stop; East and South bound.

BRIARFIELD WAY - controlled intersection: one (1) stop sign West bound.

CORNISH WAY - controlled intersection: one (1) stop sign West bound. One marked pedestrian crossway.

BIDDULPH WAY - controlled intersection: one (1) stop sign East bound. BIDDULPH WAY is the entrance to Nesbit School.

OXFORD WAY - controlled intersection: two (2) way stop; North and East bound. Roadway curves to right, sight distance limited.

HILLER STREET 100-1200 BLOCK, cont.

WESSEX WAY - controlled intersection: two (2) way stop; East and West bound. Roadway curves to left, sight distance limited.

MASONIC WAY - controlled intersection: one (1) stop sign East bound.

RALSTON AVENUE - major arterial: controlled intersection, traffic signals.

RALSTON "Y" SEPARATION - controlled intersection: two (2) way stop North and West bound.

O'NEILL AVENUE - controlled intersection: one (1) stop sign South bound.

DEVELOPMENT:

Residential and business. Pedestrian right-of-way, both sides of the street from STERLING VIEW to O'NEILL AVENUE.

CHESTERTON AVENUE 300-600 BLOCK

DIRECTION:

North and South bound

TRAFFIC LANES:

Two (2) lanes

Width: approximately 30 feet

TOPOGRAPHY:

HILLER STREET - controlled intersection: one (1) stop
sign West bound. Roadway curves to right;
sight distance limited.

MOUNTAIN VIEW AVENUE - uncontrolled; sight distance acceptable.

MARINE VIEW AVENUE - controlled intersection: four (4) way stop.

BRIARFIELD WAY - uncontrolled; sight distance acceptable.

CORNISH WAY - uncontrolled; sight distance acceptable.

OXFORD WAY - controlled intersection: one (1) stop sign South
bound.

DEVELOPMENT:

Residential

SAN JUAN BOULEVARD 2800-3000 BLOCK

DIRECTION:

East and West

TRAFFIC LANES:

Two (2) lanes

Width: approximately 24 feet

TOPOGRAPHY:

CIPRIANI BOULEVARD - controlled intersection: one (1) stop sign East bound. Downgrade; road curves to left at 2804 SAN JUAN BOULEVARD, sight distance acceptable. Roadway curves to right at 2816 SAN JUAN BOULEVARD, sight distance acceptable. Roadway curves to right at 2832 SAN JUAN BOULEVARD, sight distance acceptable. Grade steepens approaching intersection of Monte Cresta.

MONTE CRESTA DRIVE - controlled intersection: three (3) way stop; North, South and West bound. Roadway curves to left at 2904 SAN JUAN BOULEVARD, sight distance acceptable. "S" curve from left to right between 2914 and 2920 SAN JUAN BOULEVARD, sight distance limited.

MARBURGER AVENUE - "S" curve from right to left between 2934 and 3009 SAN JUAN BOULEVARD, sight distance limited. Roadway curves to right at 3020 SAN JUAN BOULEVARD, sight distance acceptable. Roadway steepens at 3030 SAN JUAN BOULEVARD, sight distance limited. Roadway curves to right at 3017 SAN JUAN BOULEVARD, sight distance limited.

EAST LAUREL CREEK ROAD - unpaved; minor traffic.

BARTLETT WAY - unpaved; minor traffic.

DEVELOPMENT: Residential

SHOREWAY ROAD - EAST CITY LIMITS TO SOUTH CITY LIMITS

DIRECTION:

North and South

TRAFFIC LANES:

Two (2) lanes separated by painted line
Width approximately 22 feet average

TOPOGRAPHY:

EAST CITY LIMITS - Roadway curves to left; sight distance limited. Roadway curves to left; sight distance acceptable.

SEM LANE - controlled intersection: one (1) stop sign West bound.

SOUTH CITY LIMITS - goes straight to San Carlos.

DEVELOPMENT:

Business including one large hotel.

DAVEY GLEN ROAD 200-500 BLOCK

DIRECTION:

Both

TRAFFIC LANES:

Two (2) lanes

Opposing lanes separated by painted line

Width: approximately 38 feet

TOPOGRAPHY:

EL CAMINO REAL - controlled intersection: one (1) stop sign
East bound. Roadway curves to left; sight
distance limited.

MIDDLE ROAD - controlled intersection: one (1) stop sign South
bound.

DAVEY GLEN ROAD is an upgrade from EL CAMINO REAL to MIDDLE ROAD.

DEVELOPMENT:

Residential and residential structures; meaning apartment buildings

CARLMONT DRIVE 2100-2500 BLOCK

DIRECTION:

East and West bound

TRAFFIC LANES:

Two (2) lanes

Width: approximately 33 feet

TOPOGRAPHY:

ALAMEDA DE LAS PULGAS - controlled intersection: three (3) way stop; North, South and West bound. Upgrade.

VILLAGE DRIVE - roadway curves to left; downgrade, sight distance limited.

HASTINGS DRIVE - downgrade and upgrade.

MERRY MOPPET LANE - controlled intersection: one (1) stop sign West bound. Roadway curves to left, sight distance limited.

MULBERRY COURT - roadway curves to left, sight distance acceptable.

LAKE ROAD - controlled intersection: one (1) stop sign South bound. Roadway curves to left; upgrade, sight distance limited.

Between LAKE ROAD and the end of CARLMONT DRIVE is the Jewish Community Center.

DEVELOPMENT:

Business and residential structures, meaning apartment buildings. Pedestrian right of way on both sides of street from ALAMEDA DE LAS PULGAS to end CARLMONT DRIVE.

HASTINGS DRIVE 2200-2600 BLOCK

DIRECTION:

North and South bound

TRAFFIC LANES:

Two (2) Lanes

Width: approximately 34 feet

TOPOGRAPHY:

CARLMONT - one stop sign southbound. Roadway steep upgrade/downgrade.

CLIFFSIDE COURT - one stop sign southbound. Roadway curves to left.

RIDGEWOOD COURT - one stop sign southbound. Roadway continues uphill.

BRIDGE COURT - one stop sign southbound. Roadway continues uphill.

PARKRIDGE COURT - one stop sign southbound. Road continues to Cranfield.

CRANFIELD - Intersection of Hastings east-west route into San Carlos.

DEVELOPMENT:

Residential structures, meaning townhouses.

LYALL WAY - CONTINENTALS TO RALSTON

DIRECTION

East and West bound

TRAFFIC LANES:

Two (2) Lanes

Width: approximately 32 feet

TOPOGRAPHY:

CONTINENTALS WAY - one stop West bound

LAKE ROAD - one stop East bound

MERRY MOPPETT LANE - one way route to Carlmont

RALSTON AVENUE - Controlled intersection: one stop East bound

DEVELOPMENT:

Residential structures (Norman Place) and Merry Moppett School on south side.

U.C. BERKELEY LIBRARIES



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